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Geographical Spice.

A MANUAL FOR THE USE OF TEACHERS.

BY

ELIZA H. MORTON.

LEBANON, OHIO:
MARCH BROTHERS,
PUBLISHERS.

HARVARD UNIVERSITY

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OF EDUCATION

GEOGRAPHICAL SPICE.

A MANUAL FOR THE USE OF TEACHERS.

There are stranger things in heaven and earth
Than are dreamed of in your philosophy.

BY

ELIZA H. MORTON,

Author of "Potter's Series of Geographies," etc., etc.

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GRADUATE SCHOOL OF EDUCATION
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INTRODUCTION.

BITS of authentic information of an attractive nature have been likened by instructors in Geography to spice in a pudding; for material of this kind, judiciously used, always adds interest to a recitation, and is of value, although strictly speaking it may have but little, if any, connection with the great principles of the science.

Most of the teachers in our public schools have but little time to search in libraries or in books they may have at home for brief descriptions of the great wonder flowers that bloom in the gardens of the world; hence a book giving tried, tested, and reliable notes of this kind must be welcome.

Supplementary matter of this kind must always be secondary to leading principles, and should be used to make great truths shine out more clearly. It is easy for a bright teacher to amuse a class, and to make a lesson resemble a parlor entertainment of games and fairy tales, but that should be far from the object sought. "Geographical Spice" should be used, not as a material out of which lessons are to be constructed, but, as the name implies, as something to be introduced naturally in connection with everyday work for the purpose of kindling the child's enthusiasm, awakening his imagination, and arousing his interest in things and places far off and unseen.

Children naturally take pleasure in the marvelous, and the wonders of earth, sea, and air appeal to their curiosity, and may be used as powerful agents to awaken the mind, to open new worlds of thought, to vary the monotony of school exercises, and to make Geography one of the most delightful of studies.

In this little book no attempt has been made to fully cover any specified ground nor to arrange the subjects logically. The aim has been to select spice that has not lost its flavor, and to present it in a way so that the teacher of advanced classes, as well as the instructor of the little folks, can readily find something each day with which to season his instruction to suit the tastes of his pupils, and to help in the great work of stimulating their minds to a state of vigorous activity.

ELIZA H. MORTON.

GEOGRAPHICAL SPICE.

A FEW OCEAN WONDERS.

BROWN ICEBERGS.

In the Atlantic Ocean brown icebergs have been observed. This color is no doubt due to the earthy matter mixed with the ice.

MILK CANALS.

In the Gulf Stream smooth white streaks called Milk Canals are not uncommon. The cause of these bands is not certainly known. Some suppose them due to myriads of animalcules, and others to the exudation of oil from whales and other marine animals. These canals are always calm and smooth compared with other parts of the Gulf Stream.

FISH FISH-HOOKS.

Among the peculiar inhabitants of the sea is the sucker-fish, found in parts of the Atlantic Ocean. This fish is used by the Indians as a fish-hook. They attach it to a long line that has a buoy at the end of it, and throw the apparatus overboard. This fish fish-hook darts after another fish and attaches itself to it by means of a sucker on the top of its head. The Indian paddles his canoe to the buoy and takes possession of the prize. This is continued until he has obtained all the fishes he wants.

FISHES THAT WALK.

There are fishes that not only traverse the bottom of the ocean, but also walk on the dry land. The gunnard is a fish that closes its fins against its sides like the wings of a bird, and without moving its tail walks along the bottom of the sea by means of six rays, three on each fin, which it places successively on the ground. It can move in all directions by means of these rays. These fish have large heads and bodies, and could not support themselves on their slender rays without the aid of swimming bladders which help to hold them up. Humboldt tells us that he once saw a species of Doras leaping over the dry ground by means of its fins, and Layard once met some perch-like fishes walking along the dusty road in the middle of the day. Sir Emerson Tennent mentions the fact that he has seen fishes walking across the country, and one writer speaks of fish that by making an extraordinary use of their fins can climb trees.

RED FOG AT SEA.

Vessels on the Atlantic Ocean, many miles from land, have at times encountered a dense fog, consisting of red-colored dust, which covered the rigging with a thick coat, and rendered the air hazy so that vessels a short distance away could not be distinguished.

OCEANIC TREES.

On the bottom of the Antarctic Ocean in certain places are sea-weed trees with trunks as thick as a man's thigh and eight or ten feet in height. These trees when uprooted by the currents and cast ashore are often mistaken for drift-wood and collected for fuel.

THE BEAUTY OF AN ICEBERG.

The beauty of the floating masses of ice in the polar seas is thus alluded to by a well-known explorer:

"The sublime beauty of an iceberg flashing in the sunlight is beyond description. Solid and mighty, it is yet a subtle object. The light plays through it as through an opal. Its side is blazed with all the colors of the rainbow. These varying colors are due partly to its parallel lines of stratification; partly to the irregular form of the fractured surface, the myriad of reflecting faces set at all angles; partly to the sunlight dissolving in the sharp prisms of its sides and stealing through the mist and spray of the falling waters, flinging here and there the most radiant hues; partly to the waters of the sea in which the berg floats, sometimes green, sometimes blue, all the while the laughing waves bear it aloft, and, encouraged by the sun, leap round and kiss it gently, with each touch stealing away the crystal particles which were theirs of old and theirs of right."

SEA CARPETS.

In the Atlantic Ocean are vast expanses of water so thickly covered with sea-weeds that they resemble great carpets. These regions have been called "Grassy Seas." The sea-weed of which they are composed is covered with clusters of air vessels called tropical grapes. These weed carpets afford food to many small creatures and shelter the eggs and young of myriads of fishes.

MILITARY FISH.

Among the coral islands of the Pacific is found a species of mullet fish which is a military character. These little creatures go in armies, and have officers, pioneers, and a rear-guard. Scouts above and below also accompany each army. If the danger threatens from above, the upper scouts plunge downward; if the danger is from below, the lower scouts dart upward, and thus warn the army. The guard is relieved twice or thrice an hour, in the orderly fashion of disciplined soldiery.

A SEA-BIRD OF SWIFT FLIGHT.

The albatross has immense wings and can fly very swiftly. It has been said that this bird could take breakfast at the Cape of Good Hope and dine at New York, and yet not greatly hurry itself.

TEMPLES IN THE OCEAN.

In many places on the bed of the ocean are tabular masses of coral and trunks joined together forming arches, pillars, and floors, like great temples in the sea. In places these coral buildings cover large areas, and as they stand in their beauty, built without axe or hammer, they seem fit palaces for sea nymphs and mermaids.

BIRDS THAT SIT ON THE WATER.

The petrel is a bird that lives on the ocean, only going to the land to deposit its eggs. When this little bird wants to take a nap it makes a feather ball of itself, and sits down on the water. Its feathers are so oily that it can not sink. When it flies it skims over the water, and looks as if it was walking on it. The islanders in cold countries draw wicks through the dead bodies of these birds, and make lamps of them. They are sometimes called "Mother Carey's chickens."

SINGING FISHES.

There is a small fish called the siren, that begins to sing at sunset, and keeps up a low mournful sound all night. It is not a timid fish, and continues its music even when people are standing near to listen.

FLOWERS IN THE GARDENS OF THE SEA.

Deep down in the caves of the sea, fixed to rocks, are living flowers of every size, form, and color. The body of the sea anemone is soft, and consists of a simple

sac, broad at the base and open at the mouth. Around the mouth are rows of feelers, which contract and expand, making a bud or a many-petaled flower in full bloom. These sea flowers are really animals, which look like flowers. They resemble carnations, asters, dahlias, daisies, and other garden blossoms, and some have the power of giving electric shocks.

PARROT-FISHES.

Parrot-fishes are found in the tropical and subtropical parts of the Atlantic and Indo-Pacific Oceans. They derive their name from their sharp-edged jaws, which resemble in appearance the beak of a parrot. They bite and scrape off parts of coral stocks in order to obtain the animalcules, and cut off branches of tough fucus with their jaws. They are usually of beautiful colors, which fade after death. Some of these fishes are three feet long.

ENORMOUS SHELLS.

Shells, six feet long and weighing two hundred and fifty pounds each, have been taken from the Pacific Ocean. It is said that these enormous shells sometimes catch sharks by the tail.

A FISH THAT STINGS.

The weever, or sting bullfish, found on the British coasts, attains the length of nearly a foot, and has strong, sharp spines attached to its gill-covers. These can be directed backward close to the body, or made to stand out like a spear. If assailed, it makes use of its spines, afflicting severe wounds that sting more severely than those of a wasp.

FIREWORKS IN THE OCEAN.

The phosphorescent animals of the ocean are numerous. Some of these are very small and others are very large. In places in the Indian Ocean millions and millions of luminous sea creatures, each not larger than a spark, gather together in masses and make the water look like sheets of fire. A naturalist who bathed among them said that he found himself luminous for hours afterward; while the sands of the shore on which the creatures were stranded at low tide seemed like grains of gold. On the bottom of the ocean are animals which send out a soft, golden-green light. The lamp-fish carries on its head a light, which sends out silver flashes at night. A species of shark is intensely brilliant at night, and when killed retains its brightness for quite a length of time. Stars, fiery serpents, pillars of flame, and many other forms of light, flash out from the sea, rivaling the most beautiful fireworks ever made by man.

NORTH AMERICA.

THE MOST NORTHERN RAILROAD IN AMERICA.

The Calagary and Edmonton Railroad, which connects the Canadian Pacific road with the north fork of the Saskatchewan River, is the most northern railroad in America. One can now travel by steam from the city of Mexico to the shores of the Mackenzie River, with the exception of several short portages.

A CURIOUS EFFECT OF ARCTIC COLD.

A noted Arctic explorer, among other odd things, tells of the effect of cold on a wax candle which was burned in a room where the temperature was thirty-five degrees below zero. It was so cold that the flame could not melt all the wax of the candle, but was forced to eat its way downward, melting holes in the thin walls, leaving a sort of lace-like cylinder of white wax standing, with a tongue of yellow flame burning inside of it, and sending into the darkness weird streaks of light.

A COLD LUNCH.

The noon lunch of the natives in many parts of the Arctic regions is of raw, frozen meat. The flesh of the reindeer, seal, walrus, and other sea animals is used for food. Chunks the size of one's fist are cut from the frozen mass. These are pounded with the back of an axe until they are somewhat softened, and are then eaten. It is said that the effect of this cold lunch is to make the person shiver at first, but in a little while a reaction sets in, and he is warmer than if he had eaten a hot meal.

DUCK ISLANDS.

In Baffin Bay are certain islands so thronged with eider ducks that they are called Duck Islands. The mother ducks pluck the down from their own breasts and place it about their young; and should this be removed, they will strip off a further supply. The down taken from a dead duck is almost worthless, while that taken from a living bird is very valuable. Eider down is so elastic that three quarters of an ounce will fill a large hat, while two or three pounds may be pressed into a ball and held in the hand.

LUNA RAINBOWS.

The luna rainbow is most frequently seen in high northern latitudes, in the vicinity of icebergs. The cold radiated by the berg condenses the warmer air, through which the moon shines, thus causing a rainbow almost as brilliant as one caused by the sun shining through falling drops of rain.

NATURAL BENCHES.

On the banks of the Frazer River, above Yale, are terraces, or tiers, of land resembling benches cut in the mountain side. The lowest tier presents a flat surface of several miles in extent. The second tier is sixty or seventy feet above the lower one, and the third tier some four hundred feet higher. These great natural benches are uniform and even, and of the same height on each side of the river. A few trees grow upon them.

THE VALUE OF A NEEDLE.

In Eskimo lands a little sewing needle is prized by the women as a precious article. If a woman is fortunate enough to obtain one she makes an ivory case for it and fastens it about her neck, and never allows it to

be taken from her. When she dies the needle is handed down to her favorite daughter. If she breaks the point of the needle she searches until she finds a bit of stone fine enough to grind a new point on it. If she breaks the eye she laboriously etches a groove in the shank, to which she attaches the sinew, as the shoemaker attaches his waxed thread to his bristle. The value of this little article to an Eskimo woman can be appreciated when it is remembered that it is her duty to make the garments for herself and husband, and that the bird-skin shirts they wear are made of from seventy to one hundred bird-skins neatly sewed together. No wonder a woman is willing to give all she possesses for the bit of shining steel which is capable of rendering her such important aid in her work. If she did not have it she would have to sew with bits of bone or other sharp substances, working at a great disadvantage.

BATTERING-RAM VESSELS.

The prows of the vessels used by explorers in the Arctic regions are made of, or covered with iron, and are in fact great battering rams, made thus for the purpose of pushing aside floating ice, and forcing their way through the frozen sea of the North.

A GREAT ICEBERG FACTORY.

Western Greenland has been called the great Iceberg Factory of the world, for here by glacial movements on land great masses of ice from the interior are forced into the ocean and broken off by the force of the water, thus forming icebergs. This process is called "calving." Fleets of these stately ice vessels sail southward every day from this great factory.

A GLUTTONOUS PEOPLE.

The Eskimos of Greenland and other portions of northern North America are a gluttonous people. It is said, on good authority, that it is not an uncommon occurrence for an Eskimo man to eat an enormous meal and then lie on his back and let his wife feed him with bits of blubber until he can not move.

FILTHY BATHING.

The Eskimos are not given to bathing, but the children when very young are sometimes washed by being licked with their mother's tongue before being put into their bed, which is a bag of feathers.

THICK ICE.

Lieut. Peary, speaking in one of his lectures about the great inland sea of ice in Greenland, said that he had frequently stood on ice that was from one to one and a half miles in depth.

CHEWED SHIRTS.

The Eskimos wear undershirts made of bird-skins, which are chewed in the mouth by the women until they are soft. These skins are taken from auks which frequent the sea coast. Sometimes several hundred skins are used to make one garment. They are worn with the down next to the body.

QUEER SHOES AND STOCKINGS.

The Eskimos wear stockings made of bird-skins, over which is laid a padding of dry grass. Over this, for a boot, is drawn the skin of a bear's leg, to which the natural sole of the bear's foot is attached.

TALLOW CANDY.

The candy of the Eskimo children consists of reindeer tallow, which is put up in pretty, bright red packages made out of the feet of waterfowl. The women cut off the red feet of this bird, which is called the dovekie, draw out the bones, blow up the skins so as to make pouches, and fill them with tallow, and thus make candy packages for the little folks.

A STRANGE OFFER.

Lieut. Peary once displayed a bright new jack-knife to an Eskimo, who forthwith wanted to trade, offering his wife and two children for the coveted article.

AN ODD FAMILY RECORD.

In northeastern Greenland the people have a queer way of keeping the family record. They have no written language, but each baby at birth is given a fur bag which is regarded as a sacred possession. Each time the sun appears after a long arctic winter a bone is put into the bag to mark a year of the baby's life. No little Eskimo ever attempts to make himself older than he is by adding a bone to the bag before the appointed time.

A REMARKABLE GLACIAL RIVER.

The Lucie Glacier of Alaska has an interesting feature. A river one hundred and fifty feet wide bursts from beneath a high archway of ice, and for a mile and a half swiftly flows between banks of ice and over an icy floor. It then enters an archway about fifty feet high and disappears in another tunnel. One can look far into this tunnel and note that it retains its dimensions as far as the eye can see. No one has ever dared to explore this tunnel by drifting through it with the stream. Where the river emerges is not known. Blocks of ice seem to fall from the roof of the tunnel occasionally, as is indicated by the sounds which reverberate through it like the explosions of artillery.

SOLID RIVERS.

The glaciers of Alaska look like frozen rivers emerging from the clouds. A noted writer thus speaks of them: "There are glaciers and glaciers. In Switzerland a glacier is a vast bed of dirty, air-holed ice that has fastened itself, like a cold porous plaster, to the side of the Alps. Distance alone lends enchantment to the view. In Alaska a glacier is a wonderful torrent that seems to have been suddenly frozen when about to plunge into the sea. Down and down mountains wind these snow-clad serpents, extending miles inland, with as many arms sometimes as an octopus. Wonderfully picturesque is the Davidson glacier, but more extended is the Muir glacier, which marks the extreme northerly points of pleasure travel. Imagine a glacier three miles wide and three hundred feet high at its mouth. Think of Niagara Falls frozen stiff, add thirty-six feet to its height, and you have a slight idea of the terminus of Muir glacier, in front of which your steamer anchors. Picture a background of mountains 15,000 feet high, all snow-clad, and then imagine a gorgeous sun lighting up the crystals with rainbow coloring."

A STRANGE WAY OF INDICATING GRIEF.

The Alaskan Indians indicate their grief for a dead relative by blacking their faces with soot and fish-oil. Thus, black faces take the place of the black apparel of civilized mourners.

MEN WITH BANGS.

The Point Barrow Eskimo men cut their hair square across the forehead, and comb it down into a straight bang, with a long lock covering the ear on each side of the head. They also clip a round spot on the crown of the head and a strip two inches wide down the back of the head. This, they say, is to prevent snow-blindness in the spring.

TAILS FOR ORNAMENTS.

It is very fashionable among the Eskimos of northwestern America for every man and boy to wear a bushy tail of some animal. A wolverine's tail is considered the most stylish, but those who can not afford that, wear the tail of a dog or that of a wolf. This custom gave rise to a story told years ago by Russian travelers that there were on the American coast men with tails.

WIND COMBING THE HEADS OF MOUNTAINS.

A peculiar phenomenon occurs in the Rocky Mountains, as well as in some other places. The prevailing wind currents often carry snow to the summits of high mountains and comb it over their heads, so that it becomes compacted and hangs down on the reverse side, like forelocks over a brow. These masses of snow often weigh hundreds of tons, and extend out over the mountains many feet. They sometimes break off and slide down the slopes, forming dangerous avalanches.

POTASH KETTLES.

In the vicinity of the Great Lakes are singular depressions in the ground caused by the washing away and decay of the soft limestone under the ridges where they occur. These holes in the ground are called "potash kettles" by the people of that region.

NONCOMBUSTIBLE CLOTHING.

Canada is noted for its asbestos products. At Thetford, on the line of the Quebec Central, is a celebrated mine. The product of this industry is largely shipped to Europe. At Quebec and other places asbestos goods of many kinds may be seen. Mittens, shirts and overalls for firemen's use are made from this mineral. The cloth is of a light granite color, quite soft and pliable, and resists the action of fire.

A CONE OF ICE.

The Falls of Montmorenci in Canada, at the mouth of a river of the same name, are very beautiful and in the winter present a singular appearance. The river is about seventy feet wide, and leaps over a precipice about two hundred and fifty feet high. The falling spray freezes, and in a few months forms a glittering cone of ice nearly one half as high as the falls themselves.

A LONG BRIDGE.

The Victoria Bridge, at Montreal, is about a mile and a half long. It is one of the longest bridges in the world. It presents a surface for painting equal to thirty-two acres.

A QUAINT CITY—QUEBEC.

Henry Ward Beecher thus refers to this singular city: "Queer old Quebec! Of all cities on the continent of America, the quaintest. It is a populated cliff, a mighty rock, scarped and graded and made to hold houses and castles, which, by all proper natural laws, ought to slide off from its back like an ungirded load from a camel's back. But they stick. At the foot of the rocks the space of several streets has been stolen from the river."

BROTHER JONATHAN.

The pet name of "Brother Jonathan," applied to patriotic citizens of the United States, was derived from an expression of Gen. Washington, who, when in perplexity, used to say: "Let us consult Brother Jonathan," meaning Jonathan Trumbell, Governor of Connecticut. The name after a time became synonymous with patriotic manhood, and with that of our country.

UNCLE SAM.

How the United States government received the name "Uncle Sam" is explained as follows:

During the war of 1812 Samuel Wilson, familiarly known as "Uncle Sam," was an inspector of provisions for the American army at Troy. The casks containing the provisions were marked "U. S.," and one of the workmen on being asked the meaning of the abbreviations said he did not know unless they meant Uncle Sam Wilson. The joke spread from camp to camp, and was eventually adopted as a pet name for the government.

UNCLE SAM'S SLEEVE-BUTTONS.

Rhode Island and Delaware, because of their small size in comparison with the other states, have been called "Uncle Sam's Sleeve-Buttons."

RIVERS OF SAND.

West of the Rocky Mountains, in what was formerly known as the Great American Desert, are small streams, which during the rainy season become torrents of flowing sand. Travelers who are unfortunate enough to fall into these rivers are soon buried forever from sight. But few of these rivers have mouths. They rise in the mountains and lose themselves in the sand.

CAMELS IN THE UNITED STATES.

It is not generally known that there are wild camels roaming over the plains west of the Rocky Mountains. Many years ago a man brought a number of these animals to the United States, hoping to make them useful as beasts of burden across the western plains. The scheme failed, and they escaped to the region formerly called the Great American Desert, where they have multiplied and, although driven from place to place by the onward march of civilization, still exist and roam to-day as wild as deer.

STRAW STABLES.

On the great western plains thousands and thousands of acres of wheat are raised, and when it is harvested much straw is left behind. This is often baled up as one would make block houses, and in these straw buildings horses are housed for the winter. Some of these straw stables have windows and shingled roofs. They are very warm, and should anything occur that the owners could not provide the animals with food they could eat down their houses and thus prevent starvation.

HAWTHORNE CAVE.

In the vicinity of Sebago Lake, Maine, is a cave of peculiar interest, because it was a favorite haunt of Nathaniel Hawthorne. It is now called "Hawthorne's Cave." In the town of Raymond, which touches the eastern shore of the lake, is the early home of Hawthorne, which is a plain, weather-beaten, two story house.

THE LARGEST PAPER-MILL IN THE WORLD.

At Cumberland Mills, Maine, six miles from Portland, on the White Mountain Division of the Maine Central Railroad, is the largest mill in existence for the manufacture of all grades of paper. This village has been facetiously called the "paper weight of the world," because of its leading manufacture.

A BAY IMMORTALIZED IN SONG.

Among the beautiful things that have been said of Casco Bay, which is on the coast of Maine, is the following tribute from Whittier:

"Nowhere fairer, sweeter, rarer,
Does the golden-locked fruit-bearer
Through his painted woodlands stray,
Than where hillside oaks and beeches
Overlook the long blue reaches,
Silver coves and pebbled beaches,
And green isles of Casco Bay;
Nowhere day, for delay,
With a tenderer look beseeches,
'Let me with my charmed earth stay!'"

COASTING DOWN MOUNT WASHINGTON.

The railroad up Mount Washington, New Hampshire, is sometimes utilized by daring people for a coasting ground. A man takes a board about three feet long and lays it upon the middle rail, and by means of an iron bolt attaches two round sticks, one on each side, for brakes, and then sits upon the board. and braces his feet against a strip in front, which is secured by an iron bolt. Taking hold of these brakes he slides down the mountain on the rails almost at the rate of a mile a minute. This is a somewhat dangerous way of traveling, and but few dare make the attempt.

AN INTERESTING HEAP OF STONES.

In the quaint old town of Concord, New Hampshire, in a clearing among the trees is a heap of stones which marks the site of a little hut in which Thoreau, one of Concord's great men, camped out for months at a time in order to be alone with the things he loved. This stone monument is the visitor's memorial of this lover of nature. Every one that visits the spot drops a stone upon the pile and it yearly grows larger and larger. The little hut was the place were Thoreau read, studied and wrote beautiful thoughts for the world to read. He delighted to be alone with the birds, squirrels, and other woodland friends, and he said he could think better in the quiet woods than in the busy village.

SINGING SAND.

One of the most remarkable instances of singing sand is that of the beach at Manchester, Massachusetts, where the sand for about a fifth of a mile gives out a peculiar singing sound when it is walked upon or when stirred with a stick. A very loud noise may be produced by driving a stick violently into the sand. It is believed that this sound is produced by friction between the angular particles, and that the conditions necessary are perfect dryness, uniformity of grain and freedom from dust.

A REMARKABLE LIGHTHOUSE.

On Minot's Ledge, near Boston, Massachusetts, is one of the most wonderful lighthouses in the world. It is a granite tower sixty-six feet high, standing amid the waves, by the force of which it is swayed like a tree in the wind. During the winter all communication with the land is shut off, and the life of the keepers is dreary in the extreme. Several of them have been removed because of insanity, and more than one has attempted suicide. The skeleton lighthouse of iron which stood on the rock before the present pile of stone was erected was carried away by a furious hurricane, and the lives of the keepers went out with that of their lamp.

THE LARGEST BLEACHERY IN THE WORLD.

Near Pawtucket, Rhode Island, is the Moshassuck Bleachery, the largest in the world. Its buildings cover thirty acres, and it employs over fifteen hundred operatives.

THE OLDEST NEWSPAPER IN AMERICA.

The most widely known journal in Connecticut is the "Hartford Courant," the oldest newspaper in America. It was founded in 1764. It is a Republican paper of

national reputation. There are some old families in the state that have taken the paper ever since it was first published. The early files contain matter pertaining to the stamp act, the administration of Washington, and other events connected with the history of our nation.

A DEEP SPRING.

On Spring Avenue, at Saratoga, New York, is a seltzer spring which has been sounded to the depth of three thousand three hundred feet, and no obstacle encountered or bottom reached.

AN HISTORICAL MANSION.

At Newburg, New York, is a stone mansion owned by the state, which is an object of interest to travelers, because it was Gen. Washington's headquarters, where the American Army was disbanded June 23, 1783, after a treaty of peace had been concluded.

THE LARGEST ARTIFICIAL STONE IN THE WORLD.

The largest artificial stone in the world is the base of the Bartholdi Statue of Liberty on Bedlow's Island, New York Harbor. Five hundred carloads of sand and over twenty thousand barrels of cement and immense quantities of trap rock were used in its construction.

INDIAN MORTARS.

At Luzerne Falls on the Hudson River Banks, New York, at low water are hundreds of circular holes known in that section as Indian Mortars. They were, doubtless, formed by the action of the water in rolling small bowlders in natural depressions in the rocks. They vary in size from that of a waterpail to that of a huge cauldron. It is claimed that the Indians used them as mortars in which to pound corn.

THE BEAUTY OF NIAGARA FALLS IN WINTER.

Niagara in winter is thus graphically described by Bayard Taylor: "I have seen the Falls in all weathers and in all seasons, but to my mind the winter view is the most beautiful. I saw them when a hundred cataracts of ice hung from the cliffs on each side, when the masses of ice brought down from Lake Erie were together at the foot, uniting the shores with a rugged bridge, and when every twig of every tree and bush on Goat Island was overlaid an inch deep with a coating of solid crystal. The air was still, and the sun shone in a cloudless sky. The green of the fall, set in a landscape of sparkling silver, was infinitely more brilliant than in summer, when it is balanced by the trees, and the rainbows were almost too glorious for the eye to bear. I was not impressed by the sublimity of the scene, nor even by its terror, but solely by the fascination of its wonderful beauty. With each succeeding visit, Niagara has grown in height, in power, in majesty, in solemnity; but in the winter I have seen its climax of beauty."

THE LARGEST DAM IN THE WORLD.

About four miles from Kitchawan, New York, is the Quaker Bridge Dam, the largest in the world. This gigantic structure is more than a quarter of a mile long and two hundred and sixteen feet thick at the base. It is designed to turn the whole Croton River into the aqueducts to the city. The lake in which forty billions of gallons of water are held back is the largest artificial lake in the world.

WHERE RIP VAN WINKLE TOOK HIS LONG NAP.

Two miles above Dobb's Ferry, in New York, on the New York Central & Hudson Railroad, is the village of Irvington, named in honor of Washington Irving. In this neighborhood is "Sleepy Hollow," a

gorge, said to be the path climbed by Rip Van Winkle before he lay down for his long nap. The very stone on which he slept is pointed out. Dame Van Winkle's chair and the flagon from which Rip drank are said to have been preserved, and these objects are displayed in a refreshment house on the mountain, and believed by the credulous to be as represented.

A GLIMPSE OF POMPEII IN AMERICA.

One of the objects of interest in Saratoga, New York, is the "Pompeia," which is an exact representation of one of the houses of Pompeii, buried by an eruption of Vesuvius in 79 A. D. It is one hundred and eighty feet long, and has already cost over one hundred thousand dollars. By visiting this house one can gain some idea of the life of a Roman noble. The utensils of his kitchen, his carved ivory ticket entitling him to a seat in the amphitheatre, the pictures that adorned his walls, and many other things are represented to illustrate the departed glory of a former citizen of a buried city.

A MOUNTAIN INSCRIPTION.

Years ago some enthusiastic lover of nature cut with a chisel upon the bare storm-beaten summit of the Adirondacks these words:

"THANKS BE TO GOD FOR THE MOUNTAINS."

The inscription thus hewn in the solid rock remains to this day clear and distinct, reminding all who look upon it of the one to whom thanks are due for all that is grand and beautiful in the natural world.

SINKING VALLEY.

About three miles east of Tyrone, New York, is a valley which takes its name from its great natural curiosity, Sinking Creek. This stream emerges from a

spring which issues from a perfect arch in a great rock. As the creek flows onward it loses itself again and again in pits several hundred feet deep, often appearing upon the surface for a short distance and then disappearing. It at length enters a large cave, through which it flows for more than three hundred yards, when the cave widens and the creek turns and plunges into a cavern which seems like a great churn. Sticks thrown in disappear at once, and no outlet for the waters has been discovered.

HOWE'S CAVE.

On the main line of the Delaware & Hudson Canal Railroad, about forty miles from Albany, New York, is, after Mammoth Cave of Kentucky, perhaps, the most extensive and interesting cavern known. One enters it by means of an irregular opening in the limestone rocks. Among the objects of interest are the following: "The Giant's Spectacles," "The Quarter of Beef," "The Sheep's Head," "The Owl," "The Leaning Tower," and "Tower of Babel." These objects are of limestone, each representing that from which it is named. The "Haunted Chamber" is a room in which a low note is echoed with a weird unearthly vibration which can not be described. The music-room is full of echoes which fill the air with musical notes. In places great masses of rocks are held between the walls and appear as if about to drop. The winding way is a narrow passage eighty rods long, and so devious that another person three feet ahead can hardly be seen in any portion of it by the one behind. The "Silent Chamber" is a room in which the silence is so profound that it is painful.

AN HISTORICAL STONE.

The identical stone upon which Gen. Washington stood when he took the oath of office as the first president of the United States is in front of the United States Subtreasury, Wall and Nassau streets, New

York. Upon this stone stands a colossal statue of the General. Cut in the granite stone, forming the base of its pedestal, is this inscription:

ON THIS SITE IN FEDERAL HALL
APRIL 30, 1789,
GEORGE WASHINGTON
TOOK THE OATH OF OFFICE AS THE
FIRST PRESIDENT
OF THE UNITED STATES
OF AMERICA.

EXTENSIVE INDIA RUBBER WORKS.

At New Brunswick, New Jersey, are india rubber factories that employ over two thousand operatives. They are said to be the largest manufactures of the kind in this country.

AN IMMENSE COAL BASIN.

The Wyoming and Lackawanna coal basin in Pennsylvania is a narrow valley fifty-five miles long and about five miles wide in the middle and tapering at each end. High ridges bound it on each side and unite it at each end, thus forming an immense basin, from which nearly half of all the anthracite coal in the United States is mined.

AN OPEN-AIR COAL MINE.

Mauch Chunk, Pennsylvania, on the Bear Mountain, is one of the most remarkable collieries in the world. The hill has been "scalped," to use a miner's expression, and an enormous bed of anthracite coal exposed to view. The bed is nearly sixty feet thick, and is quarried above ground in the open air.

A PECULIAR COINCIDENCE.

The city of Washington, D. C., was built on the site of a settlement called Rome. The former owner of the land was a man named Pope. The city is situated on a creek called the Tiber.

EASTER EGG-ROLLING.

It is a custom in Washington, D. C., for the children of all classes to assemble Easter Monday on the hillocks near the Capitol, and to run after bright-colored eggs which are thrown down the slopes. They have great fun, and at one o'clock troop into the White House to offer the President a joyous Easter greeting.

AN UNFINISHED DREAM.

Those who visit the Capitol at Washington should not fail to notice the decorations on the great dome as seen from the interior of the building. The surface is covered with a belt of figures representing the history of the United States from the discovery of the country to 1849. The conception of the artist is grand and lofty, and the work ranks high as one of genius. It was planned and partly carried out by Constantine Brumidi, a painter, who was born in Rome in 1805, and who came to this country an exile. His father was a Greek and his mother a Roman. He renewed and completed some of the frescoes on the Vatican before he was banished from his native land. In 1854 he came to Washington, and after a time entered the Capitol for the remainder of his life. The decorations of the Agricultural room are the finest of his works. The walls and doors are covered with leaves, blossoms and fruits, which glow and glisten with the touch of genius. When seventy years old he began work on the rotunda. He was obliged to lie on his back on a scaffold and paint the surface. For two years the figure of this artist high in air was the centre of interest to visitors. The last dear dream of his life was to finish the work, but his feeble hands became weary of the task, dropped the brush, and were still forever. The plan which he outlined others have carried out, but the work is not that of Brumidi. This reminds one of an unfinished dream.

A DEAD-PACKAGE AUCTION.

The Dead-Letter Office at Washington, D. C., has an auction sale annually of packages that have accumulated during the year. These packages are those that because of carelessness on the part of the senders have never reached their destination, and thus have found their way to this office. The auctioneer accepts whatever is offered, and the purchaser does not know what he has bought until after the sale. Many thousand packages are thus sold every year.

A WONDERFUL DOOR.

The main central door of the Capitol at Washington, D. C., is called the Rogers bronze door. It is double, and weighs at least twenty thousand pounds. It is seventeen feet high and nine wide, and is sunk inside a casing which projects about a foot forward. On the casing are figures representing Europe, Asia, Africa and America. On the door is a pictured history of Columbus and the discovery of America. This door was designed by Randolph Rogers, an American, modelled by him in Rome and cast in Munich. Over the transom arch is the sculptured head of Columbus, and beneath it the American eagle.

A PRECIOUS LOAD.

When the United States government wishes to transfer gold or silver from any point to the treasury in Washington, D. C., it uses the utmost care that no loss or accident occurs. The money is tied up in heavy canvas bags, each containing one thousand dollars. These bags are sealed with the government seal, and before passing from the vault each one is examined by the express company's inspector before he will put the seal of the company upon it. Fifty of these bags are loaded upon a heavy express wagon, several detectives mount the team, and the load is

taken to the office of the express company, where each bag is placed in a heavy oaken keg bound with iron and sealed, not only with the seal of the express company, but also with that of the government. These kegs are loaded upon a special iron-lined car made for the purpose. Each car will carry one million dollars in silver, or ten million dollars in gold specie. But one person knows when this car will start or to what train it will be attached. This person has at his command a corps of armed detectives who are informed a few moments before the train is to start. These detectives are distributed through the train and placed in the car. The most watchful care is maintained until the bags are safely deposited in the vaults. The laborers who handle the heavy bags are guarded by armed detectives, and any attempt at robbery would invite a volley of pistol shots.

THE LARGEST COTTON-DUCK MILLS IN THE WORLD.

The Mount Vernon Company's Cotton-Duck Mills in Maryland are the largest in the world. They were established in 1848. They turn out duck of various widths and thicknesses. They employ over thirteen hundred people, and produce yearly ten million yards of cotton duck, using twenty-five thousand bales of cotton. The mills are picturesque groups of buildings near Druid Hill Park.

THE WORLD'S GREAT PEANUT CENTRE.

The great peanut centre of the world is Norfolk, Virginia. Here are located nearly all the peanut factories of the earth. A peanut factory is a place where peanuts are cleansed, assorted, and polished by machinery, and then packed in bags. Millions of dollars' worth of "goobers" are yearly sent from Norfolk to all parts of the civilized world.

A HEALTHY SWAMP.

The Dismal Swamp, which is partly in North Carolina and partly in Virginia, has no decomposed wood. It is formed principally of juniper and cypress trees, which turn into peat instead of rotting on the ground. This swamp, therefore, is not a region of miasma. Fever and ague are unknown. The air is pure and sweet. It does not receive the drainage of the surrounding country, but like a great sponge gathers the rain and empties it into the ocean by several rivers. Its water is tinged by the juniper to a wine color, and will keep fresh and pure for years, and is said to have healthful properties. It is often used by naval vessels on long voyages.

THE NAIL CITY.

Wheeling, the metropolis of West Virginia, is often called the "Nail City," because of its extensive iron and steel manufactories.

LITTLE HELL.

Off the coast of North Carolina the southward shore current is halted by the Gulf Stream and made to drop its sands near Cape Hatteras. The meeting of these two currents causes the sea to become very turbulent and rough, and sailors call the locality "Little Hell," and this name appears upon the government pilot charts.

FERRUGINATED WOOD.

Southern Pines on the Raleigh and Augusta Air Line Railway in Moore County, North Carolina, presents many attractions to lovers of nature. Among the curious cabinet specimens to be found in the long-leaf pine forests are those of wood that has been converted to iron. The grains and knots as they existed in the original tree can be plainly seen in this wood, which is as hard as iron, and has a metallic ring when struck with a knife.

CURIOUS SNAKES.

In the swampy regions of North Carolina are some curious species of snakes. The glass snake can neither climb nor swim. Its head is like a lizard and its body is marked with transverse lines of black, green, and yellow. When irritated it breaks into pieces so that it is difficult to capture a perfect specimen. It reproduces the pieces thrown off. The horn snake rolls itself together like a hoop, and if it chances to strike a tree with the end of its tail that tree is sure to die. The milk snake sucks cows.

BEARS RIDING COW-BACK.

The inhabitants of Hyde County, North Carolina, say that the bears of that region kill cows by getting on their backs and running them into swampy regions, where they are soon mired.

THE LARGEST RICE MILL IN THE UNITED STATES.

The West Point Mill Co., of Charleston, South Carolina, operates the largest rice mill in the United States. The plant covers about sixteen acres of land, and the annual output is about three hundred thousand barrels of rice and rice flour. The rice has to be pounded to break off the paddy, and brushed by rotary brushes and other machines to clean off the dust and separate the grains.

A DREARY REGION.

Okefinokee Swamp, in Georgia, is a dark and impenetrable jungle of dead pools and dreary islands, inhabited by wildcats, bears and alligators. The inner recesses of this swamp have never been explored. Many peninsulars of high arable land push into the swamp. These are called "cow-houses," because the planters used to pasture cattle upon them. These cattle were guarded by men stationed at each isthmus.

A LAKE, THE BOTTOM OF WHICH FALLS OUT.

Jackson Lake, in Florida, has more than once lost a part of its bottom and with it nearly all its water. After a time the hole would become stopped up and the rains gradually fill up the bed. Some lakes in Florida have disappeared entirely in a similar manner, the water draining away into subterranean channels.

VAST BEDS OF BONES.

It has been discovered within the past few years that one third of the habitable part of Florida is rich in beds of phosphate, which are the remains of animals that lived ages ago. Some of the bones are in large pieces and well preserved. The bones and teeth of elephants, horses, tigers, crocodiles, and other animals have been discovered, also those of the mammoth. Fossil starfish and the backbones of sharks are among the "finds." One writer says: "It looks as though at some prehistoric time all the beasts of the field and all the birds of the air and all the leviathans of the deep had gathered for some unknown purpose in the state of Florida, and had been overtaken by a great calamity and left their bones there." These bones are used as fertilizers, and are mines of wealth to the state.

AN UNEXPLAINED PHENOMENON.

The Pine Hook Swamps, east of the St. Marks River, in Florida, are unexplored regions which extend some distance down the peninsular. Sailors on the ocean often see a column of smoke rising from a certain part of this flat land. No one knows the cause of this phenomenon. It is supposed to be a volcano or a hot spring, but all attempts to reach it have thus far been unsuccessful.

A VEGETABLE GRAND-DADDY LONGLEGS.

The mangrove tree, of Florida, has long, bow legs on which it stands, making it look like a great spider. The tree grows in shallow water along the shores of the sea. It throws out root branches which form a strong buttress or net-work of braces on which it stands. It is not often one sees a tree with roots above ground, yet all the trees in a mangrove swamp stand thus. The creaking of the branches, the rushing of the tide and the impure greenish water make a swamp of this kind a gloomy, dreary place. The swarms of mosquitoes make these localities places to be shunned.

THE UMBRELLA TREE.

The umbrella tree, a species of the magnolia, is found from Pennsylvania along the Alleghanies to Central Alabama and westward. Its trunk is less than a foot in diameter and about thirty-six feet high. Its leaves are crowded on the summit in a way to make the tree resemble an immense umbrella, hence its name. It is a very handsome tree, with large white flowers and rose-colored fruit.

MYSTERIOUS MUSIC FROM THE SEA.

Pascagoula, in Mississippi, on the Louisville Railroad, is one of the few places in the world where one can hear in the lonely night-time a weird, sad music from the sea; not the music of washing waves and singing sands, but a monotonous hum, which naturalists say comes from a vast multitude of fish of the drum species; although visitors of a poetical turn of mind prefer to attribute this mysterious music to the sighs of mermaids and the wild wails of spirits of the deep.

TREMBLING PRAIRIES.

In the southwestern part of Louisiana, near the coast and along the streams are wide, grassy prairies, which are thought to float upon the surface of subterranean waters, for they tremble beneath the feet of the traveller.

A NOVEL PLACE OF WORSHIP.

The chapel of St. Roche, in New Orleans, Louisiana, is remarkable for the fact that it has no pews. It is a brick building, almost hidden behind ivy. It has plenty of kneeling benches, and under its altar is a life-size figure of Christ, representing him as just taken from the cross. All around the altar are round slabs of marble on which are carved "Thanks," with the date when rendered and the initials of the grateful one. On the altar hanging by ribbons are wax casts of hands, arms, and feet. These are said to be the offerings of those who have had such members restored to usefulness in answer to prayers.

CITIES OF THE DEAD.

The cemeteries of New Orleans, Louisiana, are veritable cities above ground. The houses are tombs mostly in the form of miniature Grecian temples, although some are round-topped. These buildings are made of marble, granite, or brick stuccoed to resemble stone. They stand beside white shell roads and are shaded with orange, magnolia, cedar, and other trees. The coffins are deposited in drawer-like compartments, which are sealed with marble slabs. The moisture of the soil renders these houses necessary. They exhibit statues and much elaborate paneling and carving.

AN S-SHAPED CITY.

New Orleans, Louisiana, is built along the curves of the lower Mississippi, and is in the form of the letter S, although at one time it was only large enough to make the upper part of the letter, and hence was called the "Crescent City."

A RAPPING CAVE.

About twenty miles northeast of El Paso, Texas, is a cave which no Indian will enter because it has the reputation of being haunted by the spirits of the

Apaches, a tribe of Indians who were driven into this cave by the Tihuas, their enemies, and there starved and slaughtered. A visitor to this cave can hear in one corner three distinct raps, as if made with a hammer. When the sound is followed to where it seems to be, it is heard in another place. After the raps comes a whistling noise. No one has been able to account for these mysterious rappings, although there is probably a natural cause.

A COUNTRY OF DECEPTIONS.

The air of the Great Staked Plain, Texas, is so dry and clear that it is very deceiving to the eye, and plays wonderful atmospheric freaks. A mountain forty miles away seems not more than eight or ten miles from the observer. Belts of timber often appear where none exist. A ranch in a valley may seem to be on a high hill. Sheep look as large as elephants, and a railroad train often appears to be four or five miles long and a hundred or more feet high. About three or four miles east of Midland at noon a wonderful mirage is seen, representing a city in a lake with about three hundred or more windmills above it, and timber around the shores and cattle grazing on the prairie land beyond. As one approaches the vision vanishes, and nothing remains but a small town.

THE CITY OF OLEANDERS.

One of the first things a stranger notices in driving through Galveston, Texas, is the number of oleanders to be seen in every yard and garden. The city has well been called "the city of oleanders."

PIPE MOUNDS.

In Ohio are mounds, or tumuli, called pipe mounds, from which have been taken the most ancient pipes known to exist. These mound pipes are cut from a single piece of porphyry or other hard stone, and are

generally from three to four inches long and about an inch broad, with the bowl of the pipe in the centre. A fine hole connects the bowl with one end. The other end is doubtless intended to be held in the hand while the pipe is being smoked. Some of these ancient pipes have bowls carved in strange forms.

ANCIENT FIREPLACES.

On the banks of the Ohio River, near Portsmouth, Ohio, are some very remarkable ancient fireplaces exposed to view by the caving in of the banks at high water. These fireplaces are from one to three feet deep and lined with flat stones. There are evidences of great heat. Some are nearly filled with ashes and charcoal. Curious pottery, composed of shell and clay, has been taken from them, also many stone drills, pipes and other implements. These fireplaces occur at various levels, and seem to have been occupied at different times by different tribes. Who these ancient people were no one knows. Some think they antedate the mound-builders in their neighborhood.

THE LARGEST GLASS-WORKS IN AMERICA.

The glass-works in New Albany, Indiana, cover thirty acres of ground and are the largest of the kind in America. Sheets of polished plate glass, one hundred and fifty by one hundred and twenty inches in area, are made here, as well as much fine glass for mirrors. All kinds of manual labor-saving devices are in use.

LOTUS BEDS.

Fox Lake, in Illinois, reached from Chicago by the Wisconsin Central Railroad, is noted for its beds of lotus flowers. This, with the exception of Florida, is the only place in America where these blossoms can be found. The lotus bud is famed in history and song. It somewhat resembles a white pond lily, only it is larger,

yellower, and very fragrant. Its delicacy resembles that of wax, and its odor permeates the atmosphere for miles around the lake. The water is everywhere covered with great round green leaves, in the midst of which are thousands of magnificent yellow buds. Parties daily visit the lake in row boats to gather these lovely buds.

A FINE SYSTEM OF PARKS.

The finest system of parks in the world, with the exception of those of Paris, are the parks of Chicago, Illinois. They embrace over two thousand acres of land. A boulevard one hundred feet wide connects these parks and extends around the city. The entire distance from park to park is thirty miles.

THE LARGEST STOCK-YARDS IN THE WORLD.

The largest stock-yards in the world are in Chicago, Illinois. Over ten million dollars are invested in these plants. They are capable of receiving and accommodating daily twenty thousand cattle, as many sheep, and one hundred and twenty thousand hogs. They employ about thirty thousand men.

THE LARGEST AMERICAN AUDITORIUM THEATER.

The Auditorium Theater in Chicago, Illinois, is the largest and handsomest in America. Its tower is two hundred and sixty feet from the pavement, and is occupied by the United States signal service. This, like some of the other high buildings in Chicago, has been called a "sky scraper."

A HIGH BUILDING.

The Masonic Temple, Chicago, Illinois, is twenty stories high. The distance from sidewalk to roof coping is two hundred and seventy-four feet.

A SALTPETRE CAVE.

Not far from Grayson, Kentucky, is Swingle or Saltpetre Cave. This cavern received its name from the fact that during the war in 1812 saltpetre was made in its chambers. Here one can see the marks of pickaxes in the earth, and boards on which wheelbarrows were run, as well as other evidences of the business which was carried on in this underground workshop. This cave is, as a general thing, very dry, and has been utilized by one family as a cellar in which to keep vegetables, fruit, milk, and meat.

BLIND RATS.

Almost every one has heard of the blind fish of Mammoth Cave, Kentucky, but not so much has been said about the blind rats of that cavern. The rats are quite numerous but very timid. They are of a bluish color, with white abdomen, neck, and feet. Their hair is very soft, and they have large, brilliant, sightless eyes, destitute of an iris. These rats have never been known to visit the upper world. Agassiz held the opinion that they were created with a structure adapted to their home, although some physiologists are of the opinion that the rats found here were not originally blind, but having found their way into the cave at last lost their vision.

WONDERS OF LOOKOUT MOUNTAIN.

The ride by rail up the side of Lookout Mountain, in Chattanooga, Tennessee, is fraught with interest. Among the natural curiosities to be seen are the following: The Devil's Fireplace, which is a terrible chasm with the flue above and a perfect formation of a gigantic fireplace on the mountain side beneath. Snake Rock, to the right, is what seems to be the head and neck of a monstrous serpent projecting over the valley. Whale Rock and Frog Rock also bear striking resemblances to the objects from which they have

received their names. The Telephone Rock is pierced by a small hole, through which individuals can easily converse. Rock City is a collection of conglomerate rocks with graveled streets, between rows of what appear to be ruined buildings. From the top of the mountain one can obtain a view of the historic battle field of Chickamauga.

A SUBMERGED FOREST.

Reelfoot Lake, near the northwest angle of Tennessee, is a large, shallow expanse of water eighteen miles long, to a great extent covering a forest, which was submerged during the earthquake of 1811. The lake abounds in water lilies, snakes and reptiles. One can look down over the side of a boat and see the skeleton arms of drowned trees beckoning.

AN ENORMOUS BLOCK OF COPPER.

In 1869 an enormous block of copper was discovered in a mine on the shores of Lake Superior, Michigan. It was sixty-five feet long, thirty-two broad, and four feet thick, and weighed about one thousand tons. Its value was about four hundred thousand dollars, or more than the largest lump of gold ever discovered in California or Australia.

A MAGICAL SPRING.

Near Indian Lake, in Schoolcraft County, Upper Michigan, is a curious spring. It is shaped like a great bowl, about one hundred feet across and from sixty to eighty feet deep. The bottom is of white sand, which boils in places, while black rings mark boiling places now inactive. The water tastes of sulphur, and is as cold as ice and as clear as crystal. The Indians call the place "enchanted," because of a beautiful greenish light which fills the spring and transfigures everything beneath its surface. The mossy logs lying upon the bottom of the spring glow like mother of pearl, and present a very beautiful appearance.

RELICS OF AN UNKNOWN PEOPLE.

On the hillcrests of Isle Royale, and in the Ontanagon district, Michigan, are copper mines which give evidence of having been worked by a people who had considerable knowledge of the mechanical arts. Tools of stone and copper have been discovered, and shafts twenty or thirty feet deep sunk in the hardest greenstone. In one place a mass of copper was found on wooden rollers, and copper blocks with pieces chiseled off have been discovered.

AN ELEPHANT MOUND.

In Grant County, Wisconsin, is a mound in shape resembling an elephant. It is one hundred and thirty-five feet long, sixty feet high, and with a proboscis thirty-one feet from its tip to the throat of the creature.

A CITY ON A CHAIR.

St. Paul, Minnesota, on its terraced bluff, has been called "the city that has found a chair on which to sit."

AN ICE CAVE.

There is a remarkable cave in Decorah, Iowa. To the north of the town is a cliff about two hundred and fifty feet high, and at its base is the Upper Iowa River. At the foot of a steep ascent is the mouth of the cave. To appreciate the wonders of this cave it should be visited in the hottest days of summer. A large frame has been placed at the mouth of the cave to prevent it being closed by falling rocks. As you enter the cave the air grows colder and colder. There are two rooms. The first apartment extends about fifty or seventy-five feet, and has a sharp decline of ten or fifteen feet at its extremity, which is covered with ice and forms a natural toboggan slide. If you are not exceedingly care-

ful how you step you will be precipitated to the bottom. The slide brings you to the ice cave proper, which is a room about forty feet long and eight or ten feet wide, and so high in places that you can not see the top. This room is lined with ice which is as transparent as window glass. You will not care to remain long in this natural refrigerator, for the atmosphere chills one to the bone. It is very remarkable that the colder the air is outside the warmer it is in the cave, and the hotter the weather above ground the colder it is below. This cave was formerly used by the Indians as a store-room for game.

WHERE INDIAN TRIBES HELD COUNSEL.

The physical characteristics of Council Bluffs, Iowa, are those from which the city takes its name. It is situated mostly on a plain between the river and steep bluffs. These bluffs were in former days a favorite place for the Indian tribes to meet in council. Many houses are built in the ravines which intersect the bluffs.

THE VALLEY OF EVANGELINE.

It was in a beautiful valley of the Ozark Mountains, Missouri, that Evangeline spent the summer and awaited the return of Gabriel from his trip in the northwest, and it was from that place that she took up her wanderings, as narrated by Longfellow.

HELL'S HALF ACRE.

Near Hot Springs, Arkansas, is a bit of land bearing the name "Hell's Half Acre." It is a short distance up the mountain from Gillen's Spring, and consists of a large tract of land sunken twenty or thirty feet below the surface, and filled with sharp, jagged rocks of all sizes and forms. It has no outlet or inlet, and the surrounding country has a rich soil and a luxuriant vegetation. It has been said that this small

portion of creation appears as if it had never been finished, because nature hadn't quite hide enough to cover her bones.

A UNIQUE CITY.

The location of Eureka Springs, in Arkansas, is unique. It has been compared to a vast army of buildings of various sizes in an attempt to scale the mountain heights, stopping temporarily before making another effort. The houses rise one above another like huge steps. Order and regularity have been disregarded, and houses have been built upon every available spot. The streets abound in crooks and angles, and the aspect of the surrounding country is wild, picturesque, and romantic. The houses are oddly shaped, and face all the points of the compass.

THE DEVIL'S TOWER.

On the Belle Forche River, South Dakota, northwest of the Black Hills, is an isolated, fluted column of rock, rising from the plains to the height of six or eight hundred feet. It is called the Devil's Tower.

A POWERFUL WELL.

The artesian wells of South Dakota are very remarkable for pressure and for the immense quantity of water supplied. The power is utilized for water-supply, protection from fire, and the driving of machinery. At Woonsocket is one of the most powerful wells known. It was sunk by the city for the fire department. It is seven hundred and twenty-five feet deep, six inches in diameter, and throws water with a pressure of one hundred and fifty-three pounds to the square inch, twenty-three feet above the surface at full size. The waste water forms a lake, from which the ice is taken in winter for the use of the city. It can throw a two-inch stream two hundred feet perpendicularly.

A MURDEROUS ELEMENT.

It is illegal to sell alcoholic liquor in the Indian Territory, yet the traffic is carried on to quite an extent, and the Indians, when crazed by this vile poison, are even more dangerous than white men when under the same influence. The Arkansas moonshine whisky brewed in the Ozark Mountains is the most dangerous element in the territory. It is called "white mule," because it is made by white men, and because it has destructive powers equal to, if not greater than, those of a mule.

A CAVE OF DEATH.

In Montana, in the dry range, a remarkable cave has been discovered. It is near the top of a pocket in the mountain, and is almost in the shape of a flask. It is about thirty-four feet deep, sixty feet long, and thirty feet wide. Its mouth, in the limestone rock, is about three feet wide and on an incline, and so constructed that any living thing venturing near may be easily precipitated into the abyss below. When covered with snow it is a perfect death-trap to animals. The bottom of the cave is covered with the bones of animals. No doubt many Indians and hunters have slipped into this horrible pit and perished.

THE LARGEST GEYSER IN THE WORLD.

In Yellowstone National Park is the Excelsior Geyser, the largest geyser in the world. Its basin is two hundred feet across and three hundred and thirty feet deep. This basin is full of boiling water, from which clouds of steam are constantly ascending. Eruptions occur only at long intervals. This geyser throws water into the air to a height varying from fifty to three hundred feet. An eruption is a grand and beautiful sight.

DOG WELLS.

In Northern Nebraska are many prairie dog villages, and it is asserted by well-known geologists that each village has its own well. It matters not how far down the water may be, the dogs will keep digging until they reach it. Some of these wells are a hundred or more feet deep. The dogs descend by a circular staircase.

SODA LAKES.

In Wyoming are two soda lakes, each covering about seventy-five acres, and separated from each other by a ridge of land. In the summer these lakes are covered with a thick crust of crystallized soda. It appears like ice, and can be taken out in blocks of three or four feet in thickness. The air soon slacks the soda and turns it white. A railroad extends across each of the lakes. When the crust is removed another soon forms. The soda is used in the manufacture of glass and for other purposes.

A GLASS CLIFF.

In Yellowstone Park, Wyoming, is a mountain, or cliff, of volcanic glass. It consists of vertical columns, pentagonal in form and more or less irregular and distorted. The greater part of this mineral glass is jet black and quite opaque. It is the sole considerable output of obsidian, or mineral glass known. The mountain is about two hundred and fifty feet high, and is an object of curiosity and speculation. Near the place many unfinished arrowheads and other relics have been found, which go to prove that this place was known to the Indians.

A GLASS STREET.

Around the foot of Obsidian Cliff, in Yellowstone Park, Wyoming, is a roadway of pure glass, a quarter of a mile long. In order to make a passageway around the cliff, great fires were built on and around the huge

blocks of mineral glass, which, when expanded, were suddenly cooled by dashing water upon them, resulting in shattering the blocks into small fragments, thus making a street paved with broken glass.

NATURAL PAINTPOTS.

In Yellowstone Park, Wyoming, are natural basins, or pots, of mud which, in the color of the material they contain, resemble those found in a painter's shop. Here one may see a pot of yellow paint close beside one of a brilliant red; also pots of white, black, green, and other colored paints near by, apparently waiting for some artist or a master workman to appear. When this gorgeous paint is spread on a rock or other surface it soon loses its brilliancy, and for practical purposes is nothing but mud.

A NATURAL BEAR-TRAP.

In Yellowstone Park, Wyoming, is a natural bear-trap. In a portion of the park rarely visited by travelers is a V-shaped ravine about seventy-five feet deep. A poisonous gas accumulates in the pocket at the head of the gulch, and animals which venture into the trench are frequently suffocated, as shown by the skeletons and decomposed bodies scattered around. The rains and floods of early spring wash out the debris annually. This ravine in its effects on animals somewhat resembles the celebrated Cave of Dogs, in Naples, Italy.

A SALT RAILWAY ROADBED.

In the Colorado Desert, near Indio, California, is a large bed of rock salt, to which the Southern Pacific Railroad extends. This road for twelve hundred feet is graded with beautiful salt crystals. The ocean once evidently covered this place and left behind it a supply of salt which is inexhaustible. Nowhere else in the world is there a railway roadbed like this; and what is

stranger still, grasshoppers and centipedes of enormous size have been pickled in this salt, and to-day are in a perfect state of preservation.

A ROMANTIC GRAVE.

About four miles southwest of Colorado Springs, Colorado, are the celebrated Cheyenne Canons. A trail leads up the side of Cheyenne Mountain to the spot where Helen Hunt Jackson ("H. H."), the popular author and poet, was buried at her own request. It is a wildly romantic spot, and fraught with tender memories to those who knew and loved the sweet singer. Her body has been recently removed to the Colorado Springs Cemetery.

ELECTRIC SNOWFLAKES.

Lieut. J. P. Finley, of the U. S. Signal Service, in describing a perilous ascent of Pike's Peak, Colorado, tells about electric storms, when every snowflake, charged with electricity, discharged a spark as it touched a mule's back in its fall. Electric sparks also streamed from the fingertips of upraised hands. He says in his ascent he encountered a storm of sleet that cut his face so as to draw blood, and that the last five miles was a fight for life against wind, sleet, cold and rarefied air.

MONUMENT PARK.

Monument Park, in Colorado, six miles north of Colorado Springs, is so called because of the peculiar formation of its rocks. They are shafts of yellow sandstone standing singly and in groups. Many of these monuments are thirty or forty feet high. Among the most notable groups are the "Dutch Wedding," "Vulcan's Anvil," and "The Three Graces." The park consists of two long grades bordered by lines of hills, along which are the monuments which give character to this weird, strange region.

THE VIEW FROM PIKE'S PEAK.

Mrs. Catharine Cole gives the following graphic description of the view from the Summit of Pike's Peak, Colorado:

"It is not very comfortable walking about on the top of the peak. It is bitter cold—the peak one mass of stones—but the view is unrivaled. Manitou looks like a lady's lace handkerchief tossed down below the mountains. And out on the plains, Colorado Springs, with its wide, even streets, looked like a chess-board, and the fine Queen Anne hotel, and other æsthetic buildings seen through a powerful glass, might not inaptly be termed the 'castles and pawns.' The 'Spanish Peaks,' in New Mexico, fully 200 miles away, stood out in great hazy blue shadows against the dazzling sky, and the western horizon was marked by the 'Snowy Range,' one of the most beautiful and picturesque chains of the Rocky Mountains, lying like a tumbled mass of purple clouds, dappled and flecked with snow-white. Here and there little towns could be easily distinguished by the steam-like smoke hovering over them, and Denver, to the north, nearly 100 miles, was also visible."

A ROCK MENAGERIE.

In the famous Garden of the Gods, at the foot of Pike's Peak, in Colorado, the rocks are of every conceivable size, shape, and color. Among the most remarkable representations are those of the animal kingdom. Here one can see frogs, seals, bears, camels, lions, elephants—all carved by the elements out of the rocks. This artistic work of nature is by no means very imperfect, and one is startled at every turn by some figure standing out in striking distinctness and wonderful resemblance to some living creature.

THE GARDEN OF THE GODS.

The following description, by Ernest Ingersoll, gives one some idea of the wonderful region in Colorado called the "Garden of the Gods":

"To pass in between massive portals of rock, of brilliant terra-cotta red, and enter on a plain miles in extent, covered in all directions with magnificent isolated masses of the same striking color, each lifting itself against the wonderful blue of a Colorado sky with a sharpness of outline that would shame the fine cutting of an etching; to find the ground under your feet over the whole immense surface carpeted with the same rich tint, underlying arabesques of green and gray, where grass and mosses have crept; to come upon masses of pale, velvety gypsum, set now and again as as if to make more effective by contrast the deep red which strikes the dominant chord of the picture; and always, as you look through or above, to catch the stormy billows of the giant mountain range, tossed against the sky, with the regal, snow-crowned massiveness of Pike's Peak rising over all, is something, once seen, never to be forgotten. Strange, grotesque shapes, mammoth caricatures of animals, clamber, crouch, or spring from vantage points hundreds of feet in air. Here a battlemented wall is pierced by a round window; there a cluster of slender spires lift themselves; beyond a leaning tower slants through the blue air, or a cube as large as a dwelling-house is balanced on a pivot-like point at the base, as if a child's strength could upset it. Imagine all this, scintillant with color, set under a dazzling sapphire dome, with the silver stems and delicate frondage of young cotton woods in one space, or a strong young hemlock lifting green symmetrical arms from some high, rocky cliff in another. This can be told; but the massiveness of sky-piled masonry, the almost infernal mixture of grandeur and grotesqueness, are beyond expression. After the first few moments of wild exclamation one sinks into an awed silence. The reader must see for himself these grotesque monuments, these relics of ruined strata, these sportive wind-cut ghosts of the old régime, these fanciful images of things seen and unseen, which stand thickly over hundreds of acres, like the mouldering ruins of some half-buried city of the desert, if he would fully understand."

A NATURAL ORGAN.

In the grand caverns of Manitou, Colorado, is a remarkable curiosity in the shape of a grand organ, the keys of which are formed of stalactites. When these are struck they send out musical sounds, and one accustomed to rendering instrumental music by ear can play regular tunes on this natural organ. Its tones are clear and pure like those of a silver bell, and the effect of a performance of this kind in a cave is wonderful and delightful.

CHEYENNE CAVE.

Twenty-five miles north of Cheyenne, Colorado, on the Cheyenne and Northern Branch of the Union Pacific Railroad in Table Mountain, is a most remarkable natural excavation which covers several acres and has been explored to quite a distance. Among the beautiful chambers is Cathedral Room, which has rounded walls like those of a great dome. The roof and sides are studded with crystals and rock icicles, which, when illuminated by a torch, shine like thousands of electric lights. In the image room is a block of crystal which closely resembles a heathen idol. The head and features are clearly discernable. Robert Burns's chamber presents a perfect Scotch bonnet with tassel and other adornments.

ROCKS THAT BURN.

About fifteen miles north of Fruita, Colorado, is a mountain covered with flat rocks of different sizes, which will burn like coal. On the evening of the news of Harrison's election load after load of rocks of this kind, taken from the floats in the Gunnison river, were set on fire, making a blaze which streamed up over twenty feet high. One of the early settlers from the East built a fireplace of these rocks in his cabin and was soon surprised to find his chimney all ablaze.

A MARKED BOUNDARY LINE.

The boundary between Colorado and Utah at the point where the Rio Grande Railroad crosses the border is very marked and peculiar. A precipice of slanting red rock forms the conclusion of a mighty mountain chain. Above the sloping red rocks are vertical cliffs of gray stone, like immense castle walls, while the tops of the mountains are as flat as a table. The red slope at the base presents wide tablets polished as if for inscriptions. The upper stratum projects somewhat as if to protect the lower part from the weather. On this immense tablet a straight white line from fifty to one hundred feet long has been painted by man on the face of the smooth, red rock, and on each side of the line are broad, black bands, upon which, in large white letters that can be read a mile or more away, are the words: "Utah," "Colorado." The railroad station is directly on the boundary line, so that when the train stops some of the cars are in Utah, while others are in Colorado.

A REMARKABLE RAILROAD CURVE.

The Muleshoe Curve, Colorado, as one approaches Dump Mountain, on the Denver & Rio Grande Railroad, is the sharpest and perhaps the most remarkable railway curve in the world. In rounding it the train crosses a river, and the curve is so sharp that one sitting in the rear car would think he saw another train approaching in the opposite direction, when really it is the locomotive of his own train which he sees because it has doubled on the track.

WITCHCRAFT IN THE UNITED STATES.

Many of the uneducated Mexicans and nearly all of the Indians of New Mexico believe in witches. It is not an uncommon thing in that out-of-the-way corner of our country for people who are believed to be

witches to be arrested and put to death by their fanatical brethren. The more civilized inhabitants of the territory try to prevent these demonstrations of savage zeal, but they are not always successful. The medicine men are recognized judges in matters of this kind, and their influence is great. It seems strange in this enlightened age to find citizens of our republic thus deluded.

A TOWN WITH BUT TWO HOUSES.

In the extreme northern part of New Mexico is the pueblo of Taos, which has but two houses. These are each five or six stories high, and are shaped like huge pyramids terraced on four sides. Each house contains about four hundred rooms. These houses are made of stone, and plastered inside and out with adobe clay. Translucent sheets of gypsum take the place of windows. Each room has a fireplace in which sticks of wood are burnt by placing them on end. The Pueblo Indians are generally a cleanly, industrious people.

PRAYER STICKS.

Around the pueblo towns of New Mexico the traveler often comes in contact with little sticks of wood carefully whittled to a point, on which is stuck a tuft of white feathers. These sticks are upright in the ground, and represent the prayers of the natives.

PUMICE CLIFFS.

In the Cohite uplands of New Mexico are vast deposits of soft, floating stone, in the form of cliffs, several miles long and over a thousand feet high. Here is pumice stone enough to cleanse the hands of all the boys and girls in the world.

MASKED WELLS.

In the vicinity of San Mateo, New Mexico, are curious pits, or mud springs, which are small over, but very deep. They occur in alkali-covered flats. The tops of these mud pits are coated with dry mud so that they look like the surrounding plain. The man or beast who steps on one of these death-traps slumps out of sight in a moment. Many people have thus lost their lives. These masked wells seem to be bottomless.

AMERICAN MUMMIES.

Egyptian mummies have been often described, but it is not generally known that in our own country are veritable mummies, relics of a prehistoric age. In the northwestern corner of New Mexico are houses built in the cliffs. In these houses embalmed bodies have been found. These mummified bodies have attracted much attention in the scientific world, because they gave evidence of a civilization that antedates the discovery of America by Columbus.

GIANT STAIRWAYS.

The sides of many of the hills and mountains in New Mexico and other places recede and form a series of terraces, like the steps of a giant stairway.

TERRACED HOUSES.

Zuni, a pueblo or Indian town in New Mexico, about one hundred and seventy miles southwest of Santa Fe, has terrace-shaped houses. They are built of stone, each story receding, so that one answers in part for the platform of the one above. They are usually three stories high. They are plastered with mud, and have no doors or windows in the lower stories. Ladders on the outside are used as a means of ascent.

VANISHING RIVERS.

In Idaho are numerous streams and rivers that plunge into dark, rocky chasms and channels of lava, and are apparently lost; although they reappear, perhaps, gushing from cliffs far below. These fissures are supposed to be old lava beds. Lava, as it cools, sometimes forms a roof under which a fiery stream flows until it becomes exhausted, leaving an empty channel or chamber. A break in a roof of this kind forms an opening into which a river may disappear.

SAND WAVES.

On the north side of the north fork of Snake River, in Idaho, is a series of waves of white sand which travel slowly up the valley over a bed of black lava. They look like the foaming breakers on a seacoast and extend a distance of thirty miles. The prevailing wind blows up the valley and pushes the sand before it. The tourist can not fail to be impressed by these remarkable and beautiful waves of froth-like sand, contrasting so strangely with the black lava all around.

STONE WAVES.

In southern and western Idaho are great expanses of what appear at a distance like the waves of the ocean, but which are really great fields of lava cooled while tossed about like the billows of the sea. In some places the lava is hundreds of feet in depth and as smooth and level as a floor, while in other regions it has hardened into every conceivable form. Many springs emerge from beneath the lava. There are thousands of square miles of these lava plains in Snake River valley. Much of the surface of these plains is coated with soil and capable of cultivation.

PULPIT ROCK.

Pulpit Rock, in Echo Cañon, Utah, on the line of the Union Pacific Railroad, is famous the world over. It very much resembles a pulpit in shape, and it is supposed that from this natural formation Brigham Young preached his first sermon in Utah, when the pioneers in 1847 were on their way to Salt Lake Valley.

SELENITE PRISMS.

In Wayne County, Utah, in what is locally called the South Wash, which is connected with the cañon of the Fremont River, is an egg-shaped mound consisting entirely of selenite crystals, which glisten in the sunlight in indescribable beauty, although the action of the wind-driven sand has roughened and battered the exterior. Within is a cavern, in which are prisms of perfect form, from one to five feet in length, weighing from ten to one hundred pounds. A magnificent group of crystals weighing over six hundred pounds has been removed from the floor of the cavern and may be seen outside. Some of them are transparent, and others are mixed with clay and sand. The mammoth prisms in the cave projecting from the floor and hanging from the ceiling resemble the heavy timbers in a mine.

GIANT'S CAVE.

Near Great Salt Lake, Utah, are peculiar, wild-looking mountains, in one of which is Giant's Cave, extending into the range about five or six hundred feet. The walls are limestone, and the ceiling and floor are conglomerate, which combination makes the chamber look as if it were built by man. When discovered many human skeletons were found in it. The mouth of the cave is called the "jaws." About fifty feet from the mouth is the "Rock of Terror," which is a huge boulder wedged between the walls and which

looks as if it was about to fall. This cave was probably hollowed out by the receding waters of the lake, and at one time had the sea for a floor.

A MOSAIC BEACH.

Fremont Island, in Great Salt Lake, Utah, has a remarkable beach about a mile long, which is covered with bright polished pebbles. Some of these stones are purple black, others pale gray, green, red, and snowy white, while a deep yellow predominates as a golden setting for the darker colors.

VELVET-LIKE SAND.

Garfield Beach, on the shores of Great Salt Lake, Utah, is world-famed for its sand, which is as soft as velvet under the bare foot. The grains are not sharp like those of ordinary sand, but curiously rounded, which accounts for the soft feeling.

THE REGION OF A THOUSAND WELLS.

In Arizona, on a high mesa, near the Colorado River, is "The Region of a Thousand Wells." The rocks are full of crevices, pot holes, and other natural depressions, some of them having a diameter of one hundred feet and of considerable depth. These wells are never destitute of water, the rain filling them with water, which is generally fresh, and sweet, and much prized by those who have occasion to use it. Some of them are several rods apart and some closer.

A PETRIFIED FOREST.

In Arizona is a strange petrified forest covering hundreds of square miles. Most of the trees are prostrate. Giant logs are scattered all about, and the ground is covered with chips of agate, amethyst, smoky topaz, and stones of all the colors of the rainbow.

Here are large and beautiful masses of purple crystals, and cross sections of wood showing the bark and veins. The agate is said to rival in beauty the finest onyx in the market. In Chalcedony Park are more huge petrified trees than can be found in any other one place in the world. This beautiful petrified wood was long ago used by the Indians for jewelry, and for arrow heads, spear heads, and other implements. We know this, because many objects of this kind have been found near the forest and also miles away. In one part of this forest huge stone logs may be seen projecting from clay bluffs, proving that years ago the trees must have been overturned by some convulsion of nature and covered with earth and mineral water, which, in the course of centuries, turned the wood into stone. Some logs may also be seen imbedded in rock cliffs. One writer says, if he were a billionaire he would want a house built of this beautiful petrified wood, but as he is not he must be content with a paper-weight.

A BRIDGE OF SOLID AGATE.

In the famous petrified forest of Arizona is a remarkable bridge. It spans a chasm forty feet wide, and is formed from the trunk of a huge tree which has fallen across the cañon. The tree is from three to four feet in diameter, and more than a hundred feet of its length is in sight, both ends being imbedded in the sandstone at the sides of the cañon. This natural bridge of solid agate is probably the only one of its kind in the world.

A COSTLY INKSTAND.

A short time before President Lincoln's death a friend of his from Arizona presented him with one of the most beautiful inkstands ever made. It was made to order from four hundred ounces of Arizona silver, worth $500. The work on it cost $862. The design

is odd and beautiful. This inkstand is now owned by Robert, Mr. Lincoln's son. It is usually kept in a treasury vault.

A RAINBOW GORGE.

The cañon of the Colorado River, which is mostly in Arizona, is accessible to the traveler at its grandest point, and is wonderland indeed. Words can not describe it. Imagine, if you can, a mighty chasm from eight to ten miles wide, between cliffs from three to six thousand feet high. Look down, if you please, into this chasm and see that silver thread. It is a river wider and much longer than the Hudson. Imagine you are on that stream looking up. Friends are above you on the cliff looking down, but you can not see them without the aid of a strong glass. The cliffs from the front appear to be perpendicular, but from within we find that they are terraced and cleft into what seem to be immense towers and castles. There are cliffs of the brightest vermilion, and others of pink, and others of pure white. Strange forms of every color are all about us receding upward. Amphitheatres, gorges, walls, precipices, temples, and ruined forts appear on every hand, and are streaked in all the colors of the rainbow. The sun is shining upon this dazzling splendor, blending sandstone, marble, and volcanic rock into one great mass of glory. The colors vary from hour to hour. No one who has not seen this mountain gorge can imagine the wonderful colors and exquisite shades presented in the bright sunlight. Dr. Wayland Hoyt says truly: "It is as though rainbows had fallen out of the sky and hung themselves there like glorious banners. It is as if the most glorious sunset you ever saw had been caught and held upon that resplendent, awful gorge."

FRESH WATER IN A SALT LAKE.

In the eastern edge of Arizona is a remarkable salt lake, which rests in the bottom of a great natural depression, or bowl, which is incrusted with dazzling white crystals. Near its center is a small, black-looking hill, which is of volcanic origin, and has a crater filled with pure fresh water.

BURIED CITIES IN AMERICA.

In the Salt River Valley of Arizona numerous buried cities have been discovered. One of these, called Los Muertos, the city of the dead, has been recently excavated. These cities are supposed to have been inhabited by a race that preceded the Aztecs, and were probably of Asiatic origin.

THE WORLD'S SUPPLY-HOUSE OF SHIP TIMBER.

Washington is noted for its great timber. It is estimated that this state has thirteen million acres of heavy timber. Saw logs range from two to six feet in diameter. The world is drawing its supply of ship timber from this state.

WASHINGTON'S FACE MOUNTAIN

In Washington is a mountain called Washington's Face, because on its summit is a rock profile of that renowned patriot.

A SOAP LAKE.

In Clatsop County, Oregon, near the mouth of the Columbia River, is a curious lake. It is about a mile long and a quarter of a mile wide. When its water is thrashed with a stick it foams like strong soapsuds. When the wind blows, it froths and looks like a frosted

cake. The water rubbed in the hands makes a lather like soap. It is said that horses will not drink the water, and that some people can not touch it without being poisoned.

A WALLED LAKE.

Crater Lake, in the northwestern portion of Klamath County, Oregon, may well be called a walled lake, for it is surrounded by cliffs from one thousand to two thousand feet high, and which present but one point by means of which the water may be reached. The lake is about seven miles long and six wide. Its water is very deep, transparent and blue.

A TREE OF BAYONETS.

A curious little tree, called the Yucca Palm, grows in Nevada and southern California. It has been described as "a tree with its fingers all thumbs." It has a stem about two or three feet high, and a great tuft of bayonet-shaped evergreen leaves, at the end of each of which is a sharp, black spine. From the center of this cluster of bayonets rises a stalk of flowers, three or more feet in height, and branching out on every side. The flowers are bell-shaped and drooping. Cloth is made from the fibre of the tree.

PINE NUT SOUP.

In Death Valley, in the heart of the Mojave Desert, in Nevada, live the Panamint Indians, who irrigate and cultivate in a rude way the valley sand, and manage to obtain a living. Among their articles of food is a soup made from the nut of a kind of pine which grows about the mountain tops. These nuts are dried in the sun, roasted in a basket of live coals, and made into a soup, which is said to have a taste slightly like that of turpentine.

TRAVELING STONES.

In Nevada, among the barren rocks in certain places, are little hollow-like basins in which are small stones huddled together in bunches. A single stone when removed to a distance of three or four feet will at once start for its fellows. These stones are almost round, and are, most of them, about the size of a walnut. The cause of these stones being able to travel is, doubtless, owing to the fact that they are composed of magnetic iron ore. When separated four or five feet they remain motionless.

GRASSHOPPER PUDDING.

The Digger Indians, of Nevada, make a queer kind of pudding. They catch grasshoppers by digging a pit too wide for the insects to jump across and too deep for them to jump out when they have fallen into it. They then gather the insects from this pit into sacks and store them away to be used as needed for food. They make a pudding by soaking a number of the grasshoppers in salt water and mixing them up with acorn flour and water.

A SALT BLUFF.

In the southeast part of Nevada, on Virgin River, is a bluff of rock salt which extends for more than twenty-five miles along the river. More than sixty per cent of the cliff is pure rock salt as transparent as ice. On the west side of the river is a salt hill of dazzling whiteness. But few if any attempts have been made to work these beds of salt.

A LUMINOUS TREE.

Near Tuscarora, Nevada, grows a tree which the Indians call the "witch tree," because it sends out a phosphorescent light which is so great that it can be seen a mile away in a dark night. A person standing

near can see to read by the light. Its foliage resembles that of the bay tree of California. Its luminous property is caused by a gummy substance which covers its branches. This is thought to be a parasitic growth, and can be rubbed off with the hand. The tree grows to a height of six or seven feet, with a trunk six or eight inches in diameter. The Indians will never approach the tree even in the daytime.

CALICO MOUNTAINS.

The Calico Mountains, in southern California, not far from the Mojave River, are so called from their colors. Here may be seen every tint of the rainbow, and hues that vary from the purest white to the deepest black. The light falls upon a ledge of royal purple, a rock of pale green, a peak of deep carmine, and a declivity of light blue. Each face and gorge seems to have a color of its own, and these all mingle, contrast and blend in a manner that can not be described in words. The most gaudy calico is a poor representation of the colors of these wonderful mountains.

THE DEVIL'S PINCUSHIONS.

On the desert lands of southern California grows a species of cactus called the "devil's pin cushion." It is globular in shape, and covered with short spines, which resemble pins with their points upward. Among these spines are seeds inclosed in white wooly capsules. The Indians use these seeds for food. They grind them between stones and make a flour which they manufacture into bread.

THE LARGEST GRAPEVINE IN THE UNITED STATES.

The largest grapevine in the United States is at Santa Barbara, California. This mammoth vine measures twelve inches in diameter, and the annual product is often four or more tons of fruit.

A MOUNTAIN SHAPED LIKE A HALF-DOME.

Near the east end of Yosemite Valley, California, is a granite mass which appears as if a dome-shaped mountain had been bisected vertically and the portion cut off removed. This lofty half-dome rises 4,737 feet above the valley and at least 8,800 feet above the sea. It is the grandest of the grand features of Yosemite. Its face on one side for two thousand feet from the summit is absolutely vertical. Its summit is said to be inaccessible. There is nothing like it in mountain scenery.

THE LARGEST ROSE TREE IN THE UNITED STATES.

The largest rose tree in the United States is in Ventura, California. It is a Lamarque rose, and the tree is three feet in circumference. The first branch is twenty-one inches in circumference. This tree often has ten thousand roses on it at one time.

LEAPING FROG ROCKS.

The Leaping Frog Rocks in Yosemite Valley, California, seem from below to be three huge frogs sitting together and looking in the same direction. The highest of them is 3,830 feet in altitude. This triple group is sometimes called the "Three Brothers."

BORAX LAKE.

Borax Lake, near Clear Lake, in California, is a body of water which in the dry seasons almost entirely disappears. The bed of the lake is covered with a deposit of borax crystals, which are obtained by sinking caissons, pumping out the water and digging up the deposits. The crystals are very pure and fit for immediate use.

A WONDERFUL GAS SPRING.

At Bartlett Springs, California, is a wonderful spring, which sends up great volumes of carbonic gas, causing the water to have the appearance of a great boiling kettle, yet no water runs away from the spring. The gas is so strong that birds fall dead by passing over it.

THE LARGEST ORANGE GROVE IN THE UNITED STATES.

The largest orange grove in the United States is at Pomona, Los Angeles County, California. It comprises four hundred acres.

THE DEEPEST MINE IN THE UNITED STATES.

The deepest mine in the United States is at Idaho Mine, Grass Valley, California. This mine is of vertical depth 1790 feet.

SATAN'S MEDICINE SHOP.

The region of mineral springs and geysers in Mayacamas Mountains, California, has been facetiously designated as "Satan's Medicine Shop." One can here see springs that boil, and springs that spout, springs with water as black as ink, and others with water as red as blood, also iron, soda, alum, and sulphur springs. Great cauldrons abound, in which dark compounds seethe and swirl. The odors are like those of a great apothecary shop, and the sounds remind one of the infernal regions as described by Dante. The waters, however, are said to be efficient in curing rheumatism and other diseases.

RECKLESS WORK CHECKED.

The lumber dealers of California have for a number of years been cutting down the sequoia, or "big trees," of that state. This work has been carried on regard-

less of law and of the fact that what was destroyed could not be replaced by other trees of the kind for at least several thousand years. The United States government is now rigidly enforcing the orders of the Land Office, and no one is allowed to cut lumber on the lands where the sequoia trees exist.

A HOT REGION.

The heat of summer in Death Valley, California, is intense and the dryness of the air remarkable. Chairs fall apart, tables warp into curious shapes, and wet clothes dry in the sun as rapidly as before a red hot stove. Meat dipped in brine and hung in the sun becomes cured in an hour, eggs may be roasted in the sand, and a human being deprived of water for an hour becomes insane. The thermometer often registers 137 degrees in the shade, and the air strikes the face like the blast of a furnace. Birds which try to cross the valley during the hottest days fall and die, overcome by the heat.

A COUNTERPART OF THE PROMISED LAND.

In its physical features, Southern California has been called a counterpart of Palestine. Its points of resemblance are many. It is a comparatively narrow strip of land. It faces a western sea. It is shut off from deserts by high mountains. It has its dry and wet seasons. It produces the olive, the fig, and the vine. Its grapes excite the wonder of beholders, and it is indeed a "land flowing with milk and honey."

AMERICAN SANDALS.

In Mexico this kind of foot-wear prevails to quite an extent. The shoemakers sit at the street corners and cut and fit a shoe while you wait. The shoe is very simple, and consists of a sole the size of your foot, with thongs for fastenings.

A MARK BETWEEN THE TORRID AND NORTH TEMPERATE ZONES.

Journeying southward via the Mexican National Railway, one comes to Catorce, which is the last station in the Temperate Zone. Before the train reaches the next station, which is La Maroma, it crosses the Tropic of Cancer and enters the Torrid Zone. The line between the two zones is marked by a pyramid, which bears an inscription indicative of the fact.

THANK-OFFERINGS OF CROSSES.

Near the landing place of Querendaro, in Mexico, are many hot springs noted for their curative properties. The traveler is surprised to see the trees and bushes hung with hundreds of little crosses, while the ground everywhere is stuck full of them. These are the thank-offerings of those who have bathed in the waters and been cured.

A WONDERFUL TELESCOPE.

Eighteen miles east of San José, California, upon the summit of Mount Hamilton, is the Lick Observatory, which contains one of the most wonderful telescopes in the world. The tube of the instrument is fifty-seven feet long, and the aperture of the visual objective glass thirty-six inches. This mammoth telescope is so delicately swung and balanced that it can easily be moved and adjusted by a single hand. James Lick bequeathed $700,000 for the building of this great observatory, and it was his wish that his body should be buried beneath it. His tomb is directly under the pier supporting the telescope. Prof. Whitney says, that from the summit of this mountain more of the earth's surface is visible than from any other known point upon the globe.

THE NEEDLE-AND-THREAD TREE.

To be able to pick a threaded needle from a tree is certainly wonderful. On the Mexican Plains is a forest growth somewhat resembling a gigantic asparagus, with thick, fleshy leaves, like those of the prickly pear cactus. Along the edges of these leaves are slender, thorn-like needles. If one of these needles is desired, all a person has to do is to push it gently backward into its sheath, and then pull it from its socket, and it comes forth bearing with it many tiny fibres. By twisting the needle as it is pulled out, the fine fibres unite and make a strong thread, which is attached to the needle, all ready for use. This thread is very strong and capable of sustaining a weight of several pounds. The natives use these threaded needles for sewing cloth and leaves together.

PEPPER FOR GUM.

The Mexican Spaniards not only use much Chile Colorado, or red pepper, with their food, but also often chew handfuls of it, as some chew gum. Travelers on Mexican railways are often surprised to see their fellow passengers chewing pepper.

A NOISY CITY BY NIGHT.

The stranger who tarries over night in the City of Mexico is much disturbed by the noise. Every quarter of an hour all the watchmen on the streets blow their whistles, which are so shrill that they pierce the air like the scream of a locomotive. Every hour during the night the watchmen call the time by the clock, and announce the state of the weather.

QUEER TOOTH-PICKS.

In Southern Mexico is found a black, hairy spider, nearly two inches long. Its fangs are very smooth, hard, and sharp. The natives believe these fangs have power to cure toothache, so they often use them for tooth-picks.

A STORY ABOUT MOUNT POPOCATEPETL.

When Cortez was invading Mexico, during the campaign against the empire of Montezuma, he fell short of powder, and sent a party under Francisco Montaño to gather sulphur from the throat of Mount Popocatepetl. The lower region was a dense forest, above which was a black surface of lava in every shape, very difficult to traverse; then came the region of perpetual snow, with its precipices, treacherous ice, and rarefied air. At length the party, after much suffering, reached the crater and cast lots to see who should be lowered into it. The lot fell on Montaño, and he descended in a basket to the depth of four hundred feet, and gathered sulphur enough to supply the army.

PAINTED CAVE.

In Mexico, on the north wall of the Rio Grande cañon, about eight hundred miles west of New Orleans, is Painted Cave, which is remarkable for the hieroglyphics painted on its rear wall, and also for the picturesque view from its mouth. The cave is about sixty feet above the river, and its opening is three hundred feet wide and fifty feet high. The origin of the paintings is not known. They are probably the work of Indian tribes who in early times made the cavern a stronghold.

VAST UNDEVELOPED IRON MINES.

The famous Cerro del Mercado, a hill in the Valley of Durango, in Mexico, is 633 feet high, and a vast undeveloped treasure-house. It has been estimated to contain 454,000,000 tons of magnetic iron ore, capable of yielding more than fifty times the annual production of Great Britain. The answer to the inquiry why these treasures are almost untouched is found in the character of the inhabitants of the country and in the political life of the nation.

GRASS CORDS.

One of the products of Yucatan is sisal grass, which grows in blades four or five feet long. When these blades dry they curl up side by side, making cords which are as strong as any cotton strings of equal size, and on which salt water, heat, or moisture have no effect.

HOT-WATER WELLS.

Amatitlan, a town of Guatemala, consists of one-story houses. The wells of the town contain brackish water, but just outside of the town are plenty of wells of clear, pure, *boiling* water.

NICARAGUAN BEDS.

The following description of the beds of Nicaragua, is more graphic than inviting. The traveler says:

"It was full midnight when we were settled for the night. And such a night! I had now my first introduction to the kind of bed in common use in the country, and which I verily believe was instituted as a punishment for the sins of the people.

"It consists of an ox-hide drawn, while green, tightly over a stout framework of wood, and afterwards elaborately polished so as to look like the head of a drum. When dry, a slab of marble is a soft and downy thing in comparison with it.

"It was on such a bed as this, with a smooth and gaudily colored *petate*, or mat, and a single sheet spread over the hide, that I was invited to repose.

"I examined this little instrument of torture narrowly, and finally turned in with heavy misgivings, particularly as I found that Pedro's mansion was full of fleas, which had already set my nerves on a gallop. I was weary enough, but it was impossible to sleep. The fleas came in hungry squadrons, and the hide bed grew, momentarily, more rigid and obdurate.

"At last I could endure it no longer. A bed on the ground, with my saddle for a pillow, and the sky for a roof, would have been luxury itself compared with this. I got up, unbarred the door, and went out on the corridor. The cool evening air was most welcome, and I vowed audibly not to go to that ox-hide bed again, and so remained outside till dawn."'

A BLACK FIELD.

The volcano of Masaya, in Nicaragua, had an eruption in 1670 which caused the lava to extend in a northerly direction a distance of about twenty miles, covering a great expanse of territory, and making it resemble an ocean of congealed ink.

A GREAT SLAUGHTER OF FISH BY A VOLCANO.

Lake Ilopango, in San Salvador, is nearly surrounded by mountains. In 1880 a volcano rose in the center of the lake, which was at that time a great fish-pond. On the outbreak of the volcanic forces the fish fled toward the shores of the lake, and as the waters receded, great masses of their dead bodies were left on the land. At Asino several hundred men were employed to bury them in order to avert a pestilence.

HOUSES OF PYGMIES.

On the island of Cozumel, near Yucatan, curious ruins of ancient dwellings have been discovered, which are remarkable for their small size. The outside measurements of some of the houses are as follows: nine feet high, fourteen feet long, and twelve feet wide, with a door a yard high and a foot and a half wide. These tiny stone houses must have been occupied by pygmies. There are many such buildings in the forests of Cozumel. Traditions agree that this island was once the home of strange little beings, and skulls have been found that bear witness to the truthfulness of these stories.

CABBAGES FROM TREES.

A certain species of the palm, which grows in the West Indies and other tropical lands, has a great terminal bud between its leaves, which resembles a cabbage, and is eaten as such.

BIG TURTLES.

The green turtle of the West Indies attains a great size. It is sometimes six or seven feet long and weighs seven or eight hundred pounds. Its color is a dark olive, shading into dingy-white. Its fat is green, and much prized by epicures.

A TREE THAT HELPED DISCOVER AMERICA.

The sassafras tree of the West Indies is indigenous to every part of the United States east of the Rocky Mountains. Its leaves are remarkable for their varying forms on the same tree. The fruit is oval and of a deep blue color, and is contained in small, bright red cups. It sends out a strong, pleasant fragrance, which, it is said, was one of the first indications that Columbus had of the nearness of land. Thus it may be claimed to have helped discover America. In Louisiana the leaves of this tree are used in soup.

A HILL OF GREEN CRYSTALS.

The Isle of Pines, in the West Indian Archipelago, is about fifty miles south of Cuba, to which it belongs. Among its elevations is Cristales Hill, which is remarkable for quantities of beautiful green rock crystals, which abound on its sides.

LACE FROM A TREE.

On the island of Jamaica, and some other places, mosquito netting and bridal dresses are stripped from a lofty tree. The natives remove the outer bark from

the lace tree and separate the inner covering from the trunk. This fibrous substance, when macerated in water, separates into layers of snowy white lace. About two hundred years ago the governor of Jamaica sent the King of England a cravat, frill, and ruffles made of this lace.

A PLANT HARD TO KILL.

In Jamaica is found a plant which will grow anywhere. Cut it off and hang it up by a thread and it will still grow. Throw a leaf into a tight box and give it neither light nor moisture, and it will put out roots all the same. Press it in a book and it will grow out from between the covers. A hot iron and boiling water are the only things that will kill it.

A REMARKABLE NATURAL CISTERN.

The Cayman Islands, which form a part of the colony of Jamaica, present a remarkable natural curiosity. On the east end of Grand Cayman is a cliff of solid flint rock, in the middle of which is a natural cistern forty feet deep, seventy feet long, and fifty wide, filled with pure spring water. Just before a storm the water emits an offensive odor and assumes the appearance of milk. The cause of this singular phenomenon is not certainly known.

SPRINGLESS ISLANDS.

The Bermuda Islands are remarkable for having neither springs nor fresh water streams, and only a few wells of brackish water. The sides of many of the hills are cleared of vegetation, leaving the coral rock exposed, which is well whitewashed. When the rain falls, it flows down these slanting walls, and is caught and stored in great tanks. Water is also obtained from the whitewashed roofs of the houses, down which it runs when it rains. Water famines sometimes occur. On Ireland Island is a large condenser, with a reserve store of water for the use of the British soldiers.

WHAT COLUMBUS SAID ABOUT THE BAHAMAS.

In one of his letters to Ferdinand and Isabella, Columbus said of the Bahamas: "This country excels all others as far as the day surpasses the night in splendor. The natives love their neighbors as themselves. Their conversation is the sweetest imaginable. Gentle and so affectionate are they that I swear by your highness that there is not a better people in the world."

A GREAT BOILING LAKE.

A great boiling lake has recently been discovered on the island of Dominica. It is upon a steep, forest-covered mountain behind the town of Rosseau. It is 2,500 feet above the sea, and two miles in circumference. When recently visited by explorers a wind blew away its vapor and disclosed a mound of water at least ten feet higher than the general surface of the lake. This was caused by the ebullition.

BRIGHT COLORED LIZARDS.

A species of lizard, numerous in tropical America, and especially in Jamaica and other of the West Indies, has the power of changing color like a chameleon. When alarmed, it passes in an instant from a rainbow hue to a dull brown. These bright little creatures are very tame and fearlessly enter houses. They have been called "hummingbird lizards," because of their brilliant colors and agility. They have fragile tails which they can throw off at will and thus escape their enemies.

LIVE LANTERNS.

In Cuba the poorer people have no money to buy oil for lights, so they capture large glow-worms and put them into gourds, which are pierced with holes, or into glass bottles, and use them for lanterns.

SOUTH AMERICA.

A LIVING CLOUD.

In crossing the Cordilleras, Darwin once observed a ragged cloud of a reddish-brown color. At first he thought that it was smoke from some great fire on the plains, but a light breeze driving it towards him, he soon found that it was a swarm of locusts. The main body filled the air from a height of twenty feet to that of two or three thousand feet above the ground. The sound of the wings was as the sound of chariots, of many horses running to battle, or like that of a strong breeze passing through the rigging of a ship. When the locusts alighted they were more numerous than the leaves in the field, and they gave the ground a reddish color.

A LARGE BUTTERFLY.

The largest and most splendid of the South American butterflies has wings seven inches in expanse, and of a brilliant metallic hue. When this butterfly flashes its wings in the sunlight they can be seen at a distance of a quarter of a mile. These butterflies seldom descend nearer the ground than twenty feet, and sail like birds, high in the air.

GUNNING FOR BUTTERFLIES.

Naturalists who desire perfect specimens of butterflies obtain them by gunning with a rifle loaded with cartridge filled with powder and water, the water being prevented by paraffine from moistening the powder. This water-load stuns the butterfly and does not injure its wings. Butterfly gunning is said to be very fascinating sport. The larger species are difficult to capture, because, like birds, they fly high in the air.

A GREEDY BIRD.

The condor, the great vulture of the Andes, has a voracity so great that it often gorges itself so it can not fly. It has been known to eat eighteen pounds of meat in a day.

A TREE THAT MAKES MEAT TENDER.

The papaw tree, of South America, has a peculiar property. It is said that newly killed meat hung among its leaves will soon become very tender and delicious, and also that the flesh of animals fed on the leaves and fruit becomes very tender. The root has an offensive odor, and the fruit is not very palatable.

A BUTTERFLY SHOWER.

Darwin describes a butterfly shower he observed off the coast of South America. It extended as far as he could see with a telescope. He said it was not possible to see a space free from butterflies.

HOWLING MONKEYS.

The traveler in the forests of South America is often startled by terrible howls, coming from troops of monkeys, which have voices so powerful that they can be heard a mile or more away. All monkeys have not this compass of voice. It is confined to a single species called the howlers.

BIRDS THAT MAKE CALLS.

The jacannas, of South America, are singular birds. They live in pairs, and occasionally one of the birds will go visiting. He leaves his mate and flies to another pair of birds near by. These always receive their visitor with much ceremony. They go to meet him and place themselves behind him and utter loud

cries. Then they stop. The guest stands erect, and, with elevated wings, makes a peculiar noise, which, no doubt, is his way of saying: "How do you do?" The host and hostess then stand side by side with outspread wings and stoop forward until the tips of their beaks touch the ground, and, with a low, murmuring sound, remain in that position for a few moments. Then the visitor goes back to his own home.

MAMMOTH LEAVES.

The bussa palm, of Brazil, has a stem that is only about ten or fifteen feet high, while the leaves are the largest of the kind produced by any known palm. Some of them are thirty feet long and four or five wide. These leaves are very useful for thatching houses. The Indians make bags of the spathes.

A MURDEROUS VINE.

The Sipo Matado, or the Murderer Liana, of Brazil, is a climbing plant that springs up close to a large tree and fixes itself upon it, spreading its arm-like branches about it and literally hugging it to death. As the murderer flourishes the tree decays, and, at length, the selfish parasite clasps in its arms a dead trunk; and, when that moulders, the vine itself falls and meets the fate it deserves.

SCARLET-FACED MONKEYS.

The scarlet-faced monkeys, of Brazil, are of a most grotesque appearance. Their bodies, exclusive of their limbs, are about eighteen inches in height. They are covered with long, straight, shining, white hair. Their heads are nearly bald, and their faces a vivid scarlet. They have bushy, sandy whiskers and yellowish eyes. Their tails are very short.

A CURIOUS WAY OF EATING FARINA.

Many of the Brazilians use farina in the place of bread. When it is served it resembles toasted crumbs. The natives help themselves to the mass by taking a pinch in their fingers and throwing it into their mouths. They hold the hand at quite a distance from the mouth and throw with great accuracy of aim, never missing the mark.

A STRANGE IDEA OF AN ECLIPSE.

The Indians of Brazil believe that the moon grows like man, and then fades away and dies, the place of the old moon being supplied by its offspring, the new moon. When an eclipse occurs they think it is due to an agency of an evil spirit which has stolen the moon's food, and thus caused it to waste away. Therefore, in order to encourage the dying moon, and to compel the evil spirit to restore the stolen food, they beat farina in a great mortar and shoot off rockets and firearms to scare away the fiend. As the moon straightway recovers, they believe their exertions have produced the desired effect.

THE ORGAN BIRD.

The organ bird of Brazil is the most remarkable songster of the Brazilian forests. When it begins to sing, its notes sound like those of a human being, then they become like those of a flageolet, and then there is a pause, and the song finishes with a number of clicking sounds like those of a piping barrel organ very much out of tune.

A CITY WITH STAIRWAY STREETS.

Bahia, in Brazil, is built partly along the foot and partly on the top of a very steep hill. Long flights of stairway streets connect the lower with the upper town. A powerful hydraulic elevator is also employed, carrying goods and passengers up and down these long flights of stairs.

AN INSECT FLOWER PETAL.

One of the most singular butterflies of Brazil has partly transparent wings. The only opaque coloring is one spot, of a violet or rose hue, and this is the only portion visible when it is flying over the bushes. It resembles the petal of a flower sailing before the wind.

A SHIRT TREE.

When a native of Brazil wants a new shirt he goes to a certain tree, cuts out a four- or five-foot log, strips the bark off unbroken, soaks it, beats it, and cuts slits in it for armholes, and he has a shirt all ready to wear.

PALM-LEAF CRADLES.

The native South American cradle is a single palm-leaf turned up at the edges. This cradle is often hung up in a tree so that the wind can rock the baby to sleep.

BEETLE JEWELRY.

The diamond beetle of Brazil is of the most brilliant colors, and shines with a beautiful metallic lustre. The dead insect is hard, like metal, and does not decay. It is much used by jewelers in the manufacture of breastpins, eardrops, and other ornaments.

A MILK-TREE.

There are several species of the milk-tree in South America. That of Brazil is one of the largest trees of the kind. It furnishes a wood much prized for ship-building. The tree is tall, with large, oval leaves and dark-brown bark. It yields a fruit that tastes like that of strawberries and cream. A white milk flows when an incision is made in its trunk. This milk, like that which comes from a cow, can be used in tea and coffee. It will burn easily, and gives out a green flame. It belongs to the family of fig-trees.

CRADLES ON THE WATER.

Many of the women of Brazil wash their clothes in the Amazon River. Those who have babies do not dare to leave them in the sand, for fear of wild beasts, so they place them in the leaf of the Victoria Regia, which is a mammoth water lily with a leaf a yard long and about as wide. Its edges turn up so as to make a natural cradle.

A SNAKE NECKLACE.

In the Amazon Valley is found a snake (Tortrix scytalæ) so beautifully colored that the natives often use it for a necklace. It is not always killed, either, before it is thus used.

BURDENS ON THE HEAD.

The native porters of Brazil have a custom of carrying everything upon the head. The women may often be seen with small articles, like a closed umbrella, an orange, or a bottle, on their heads, while the men do not hesitate to carry large articles, like a piano, six or more of them trotting along beneath the load, keeping step and time by means of a guttural noise. When they wish to take a letter to the post-office, they place it on the head, and put a stone on top of it to keep it in place.

CORAL TREES.

The coral tree of Brazil is so called because it produces long spikes of flowers that closely resemble red coral. It presents a very beautiful appearance.

LIVING MILK-WAGONS.

In Brazil the milk-dealers drive their cows from place to place to be milked. One living there is sure to get unadulterated milk if he buys it out of these natural wagons.

THE SELFISHNESS OF VEGETATION.

A German traveler has said that the contemplation of a Brazilian forest produced on him a painful impression on account of the restless spirit of selfishness displayed by the vegetation. He thought the softness, earnestness, and repose of European woodland scenery far more pleasing. It is true that each plant and tree in tropical forests seems to be striving to live itself, regardless of its neighbors. Each struggles upward, making use of everything near as an instrument for its own advancement.

FATAL CARESSES.

One way of catching monkeys in Brazil is to steal the baby monkeys, paint their faces with molasses and tartar emetic, and place them under the trees, where the parent monkeys can find them. The old monkeys, rejoiced to see their children restored, lick their faces all over, and tenderly caress them. The tartar emetic which they thus lick off makes them sick, and they are then easily captured.

THE GLOOM OF BRAZILIAN FORESTS.

A noted naturalist says: "We often read in books of travel of the gloom and silence of the Brazilian forests. They are realities, and the impression deepens on a longer acquaintance. The few sounds of birds are of that pensive, mysterious character which intensifies the feeling of solitude rather than imparts a sense of life and cheerfulness. Sometimes in the midst of the stillness a sudden yell or scream will startle one. This comes from some defenseless fruit-eating animal, which is pounced upon by a tiger-cat or stealthy boa constrictor. Morning and evening the howling monkeys make a most fearful and harrowing noise, under which it is difficult to keep up one's buoyancy of spirit. The feeling of unhospitable wildness which the forest is calculated to inspire is increased tenfold under the

fearful uproar. Often, even in the still hours of midday, a sudden crash will be heard, resounding afar through the wilderness, or some great bough or entire tree falls to the ground. There are, besides, many sounds which it is impossible to account for. I found the natives generally as much at a loss in this respect as myself. Sometimes a sound is heard like the clang of an iron bar against a hard, hollow tree, or a piercing cry rends the air. These are not repeated, and the succeeding silence tends to heighten the impression which has been made on the mind. With the natives it is always the wild man of the forest who produces all the sounds they are unable to explain."

AN ODD-LOOKING COSTUME.

The civilized negro women of Dutch Guiana wear a skirt the length of the wearer from head to foot. The superfluous material is pulled up at the waist, and fastened about the body in a way to make an enormous double flounce around the stomach. This gown has short sleeves, starched so as to stand out stiff from the arms. Two long pieces of tape dangle from the back of the dress. The women usually go barefoot, and wear a handkerchief tied about the head.

REDDISH-BROWN STREETS.

The streets of Georgetown, Guiana, are different from those of most tropical sea-board towns. The usual public highway is white and glaring, for it is made from coral, sand, shells, and mud; but in Georgetown the people bake this mud and sand in large pottery-ovens, and thus produce a reddish-brown, elastic substance, which makes a smooth covering for roads, very pleasing and grateful to the eye.

A GROTESQUE LOOKING BIRD.

The Puff-bird of the Sub-Andean region is most grotesque in appearance. It is said that it will sit

nearly motionless for hours on the dead limb of a tree, with its feathers raised so as to make its body look like a great puff ball. When frightened it drops its plumage. Some of these birds are jet black, with white about the head, and a red bill.

EARTH-EATING PEOPLE.

In the valley of the Orinoco and its tributaries are native tribes that have a depraved taste for a kind of white clay, which is a mixture of oxide of iron and some organic substance. In times of scarcity this article of the ground is more used for food than at other times, but some of the Indians are habituated to its use. Travelers are often surprised to see individuals tear pieces of this clay from their huts and eat it. This diet is very injurious to the health.

A GUACHARO CAVERN.

In the valley of Caripe, near the town of Cumana, in Venezuela, is a cavern pierced in a vertical rock, which is covered with a luxuriant vegetation. The cave penetrates into the mountains in a horizontal direction. The light of day streams into the portal for a distance of several hundred feet. The cave is inhabited by thousands of guacharos, birds about the size of hawks. The guacharo has a wide, hooked bill and brownish-gray plumage, mixed with black stripes and white spots. It has very large wings, and it can not bear the light of day. It quits the cave at nightfall only. It feeds on very hard fruits, cracking them with its beak. When a human being enters the cave with a torch these birds make a most horrible uproar. The clamor increases as the visitor advances. Indians ransack the cave every year for eggs and young birds. The nests are in funnel-shaped holes in the roof of the cavern. The fat of the young birds is valuable, and is known at Caripe as the "oil harvest." The yield from a single bird is small, but the slaughter is great.

A CURIOUS PHENOMENON.

Near the Rio de Orro River, Venezuela, at the base of the Sierra of the Colombian frontier, is a cavern which extends horizontally into the mountain. From time to time huge globes of bitumen are ejected from this cave. They explode with a considerable noise, and form a black stream of pitch, which runs into a pool near the river bank. Considerable petroleum seems to be present in the surface of the earth near the cavern.

A STRANGE DISPOSITION OF THE DEAD.

The Waraun Indians, who live in trees at the mouth of the Orinoco River, in Venezuela, dispose of their dead by tying the corpse with a strong rope and plunging it into the water, securing the rope to their dwelling. In twenty-four hours or less the caribe fish have stripped the flesh from the bones. The skeleton is drawn up and taken to pieces and put into an ornamental basket, and thus preserved.

STONE STARS.

In various parts of Ecuador are found many stones in the shape of stars, each pierced by a hole, and each having six rays proceeding from its center. They range from three to five inches in diameter, and from three fourths of an inch to two inches in thickness, and weigh from five to twenty ounces. They are mostly made of basaltic rock. Some are flat and thin, and others thick, or rise in the center upon each side like the hub of a wheel. Similar stars in metal have also been found there. Some writers think these stone stars were used as weapons; others think they were to the Children of the Sun symbols of that luminary which they worshiped. They have been found in graves, and in Peru as well as in Ecuador.

A COSTLY RAILROAD.

It is estimated that the total number of deaths among the workmen when the Panama Railroad was built was forty thousand, or, as some authorities have estimated, "a man's life for every tie laid."

A VINEGAR RIVER.

In United States of Colombia is a remarkable natural curiosity in the shape of a vinegar stream. This river proceeds from a volcano, and is composed of sulphuric acid and water. The liquid is a very good imitation of the best cider vinegar.

A GRUESOME HAT.

The Aymaras Indian women, of Peru, wear extraordinary shaped hats. Each one resembles in appearance a coffin, only it is adorned with red cloth and tinsel. Each hat is draped with black hangings, which heighten the gruesome effect.

A QUEER WAY OF YOKING OXEN.

The people of Argentine have a barbarous way of yoking up their oxen. They bind the yokes to the horns of the animal, thus bringing the weight of the load on its head, and to add to the burden of the poor creature, the driver sometimes rides on the yoke instead of on the cart.

A TREE THAT BEARS PAPER-WEIGHTS.

The sandbox tree, of Venezuela, has a tall, thorny stem with large leaves, and red spikes of flowers. Its nuts are turban-shaped, and so hard and heavy that they are frequently used for paper-weights. The nuts are divided into segments, and look like corrugated iron. When ripe, this fruit has a habit of exploding,

with a report that sounds like that of a small pistol, even after a bondage, by means of a strong wire passed around it, for a year or more.

TRAINS STOPPED BY LOCUSTS.

At Caracas, as well as at some other places in tropical regions, it is not uncommon for the following telegram to be received: "Train stopped by locusts." The locusts go in armies, and some of the insects are three or more inches long. Their bodies are full of grease, and when they get on the line of the train, and are crushed, they make the rails sufficiently slippery to prevent the wheels from biting, and especially is this so on a steep incline. The rails in many places have to be kept sanded, in order to guard, in a measure, against this difficulty.

A WHIRLIGIG SPIDER.

A species of spider abundant in La Plata has very long legs, which, when disturbed, it gathers together, gyrating itself round and round like a whirligig, thus offering no point for an enemy to attack. It revolves for fifteen or twenty seconds without pause. It is double the size of a crane-fly.

A WONDERFUL MOVING STONE.

On the mountain of Tandil, in the southern part of the Province of Buenos Ayres, is a wonderful stone. It weighs about twenty-five tons, and is in the shape of an irregular cone. It rests on a cone-shaped rock, which has a diameter of about ten inches. This enormous stone appears to be sustained on its base by an invisible axis. It is called the moving stone, because when the wind blows it sways like the branch of a great tree, and it can be made to oscillate by the power of a single man. It is twenty-four feet high, ninety feet long, and eighteen feet wide.

CURIOUS FAUNA OF LA PLATA.

W. H. Hudson says that in the pampas region of La Plata there is a poisonous toad that kills horses; the wrestler frog, which suddenly pinches its enemy with its forelegs and then runs away; a large, venomous, man-chasing spider, which pursues men on foot and on horseback; dragon-flies, a single one of which will cause clouds of gnats, mosquitoes, and sand-flies to disappear in an instant, and an opossum, fully adapted to live in trees, but which lives in a desert.

PEOPLE WHO LIVE ON HORSE-FLESH.

The Pampas Indians live entirely on horse-flesh and salt. They pass their lives on horseback. They are a brave, hardy people, and have never been subdued. They have no fixed place of residence, but wander from place to place in search of good pastures. They ride very long distances without rest, and their only beverage is maté, or Paraguay tea.

A PATAGONIAN GRACE.

When the native Patagonian of Lower Argentine eats he turns to the sun and throws down before him a little water, repeating over words like the following:

"O Father, Great Man, King of this earth; give me favor, dear friend, day by day, good food, good drink, good sleep. I am poor myself. Are you hungry? Here is a poor scrap; eat if you wish."

A ROCK FROM THE SKY.

In the plain of Tucuman, Argentine, is an immense rock which weighs about 33,000 pounds, and which fell from the sky.

A BIRD THAT BLOWS A TRUMPET.

The trumpet-bird of Bolivia is about the size of a large barn-yard fowl, only its legs are much longer. Its plumage is mostly black. Its neck feathers are soft and velvety. Its legs are a bright pea green. Its chief peculiarity is that it utters a sound like that of a trumpet. There are various species in other parts of the continent.

A NATURAL BRIDGE.

The natural bridge of Icononzo, not far from Bogota, is not often described. This bridge consists of two great rocks that unite the opposite sides of a deep cleft between two mountains. A small torrent of water dashes three hundred feet below.

WOMEN STREET-CAR CONDUCTORS.

In Chile women conductors are universally employed on street-cars. They wear a uniform which consists of a dark-blue flannel frock, a man's felt hat, and a big white apron with large pockets in it for change and tickets. A handbag is carried over the shoulder for the handkerchief and other small articles. They command a salary of $25 a month.

A CHILLY LAND.

Stoves are a novelty in Chile. The people seem to think that artificial heat is unnecessary, and so they seldom build fires in their houses.

MUMMIES IN SOUTH AMERICA.

Near Arica, in Chile, is a vast burial ground in the sand of which are mummies everywhere, in a sitting position, with their hands clasped about their knees. Some of them are robed in costly shrouds, and others in braided rushes. Each head is wrapped in dyed cotton cloth, and bound with ropes of llama wool. The flesh is dried and the features are perfect.

A REMARKABLE CEMETERY.

The Cemetario Central of Montevideo has been said to be the most costly one in South America, and, perhaps, taken as a whole, the most luxurious and elegant burial ground in the New World. Its natural beauties are not so great as those of Greenwood and other North American cemeteries, but the aggregate display of wealth is immense. The chapel at the entrance represents an expenditure of $100,000. The cemetery is divided into three sections and surrounded by walls twenty-five feet high, in which is a continuous series of vaults, one above another. Each vault is fronted by a marble tablet, on which is inscribed the names of the occupants. The upper cells are reached by a stepladder and an elevator. The surface of the walls is hung with garlands of flowers and long, streaming ribbons. The vaults in the walls are all rented, and if a family moves away or dies without making provision in their wills for the vault the contents are emptied into a common pit, and the space is rented to another family. The ground floor of the cemetery is crowded with costly and elaborate monuments and exquisite works of art executed by European sculptors. The tombs are all built up from the ground, and often in the form of temples with plate-glass doors, plainly showing the interiors. Burning candles, flowers and beautiful vases are everywhere.

ROCK RIVERS.

In most of the valleys of the Falkland Islands are glittering masses of what look like glaciers from the mountains, but which are really vast accumulations of blocks of quartzite of irregular form, making rivers of rock which are slowly sliding into the sea. Their origin is no doubt due to the disintegration of the softer layers of beds of quartzite, also to the spongy nature of the mountain slopes.

LONG SEAWEED.

The beach along the Falkland Islands is lined for miles with tangled masses of seaweed, some branches of which are six or seven hundred feet long, and thicker than the human body.

VEGETABLE ROCKS.

In many places on the Falkland Islands the low ground seems to be covered with large, gray rocks from three to eight feet across. Lichens and grass appear to grow from the crevices of these rocks, which are not rocks at all, but "balsam bog"—vegetable productions resembling great bowlders in appearance, and so hard that it is difficult to cut a piece from their surface, even with a sharp knife. When it is warm and the sun shines these plants send out a pleasant aromatic odor, and a pale-yellow gum exudes from their surface.

"WILLIWAWS."

The southern extremity of South America is noted for its boisterous weather. The squalls so frequent in Terra del Fuego are called by mariners "williwaws." They operate with great violence in Gabriel Channel, a passage in the Terra del Fuego Islands, which midway has coasts rising abruptly on each side to the height of fifteen hundred feet.

QUEER CRAB-CATCHERS.

The dogs of Terra del Fuego make a business of catching crabs. When the tide comes in the crabs come with it, and hide under the stones on the beach. When the tide is low the dogs begin to look about for their dinners. They turn over the stones with their forefeet, and knock off the crabs that cling to them. Sometimes the dogs get nipped by the crabs, and then there is great yelping; but as a general thing they are so quick about their work that the poor crabs have no time to protect themselves.

A LAKE OF PITCH.

On the Island of Trinidad, near Cape Corbaray, is a lake of pitch, from which comes nearly all the asphalt of the world. This lake is about a mile in diameter, and its surface is hard near the shore, but softer near the center, where it boils up through the cracks. Small pools of fresh water and islands may be seen all over the lake. Sometimes an island disappears in a night, and a new one appears in another place soon after. The surface of the lake is continually changing by subterranean action. Gangs of negroes are constantly at work on the edge of the lake taking out the pitch, which never seems to diminish in quantity. They break up the crust with picks and crow-bars, and load it into dump-carts, which are drawn by mules to the water's edge and transferred to ships, where it is stored in the holds. The lumps run together in a solid mass in the vessel, and have to be broken up again before they can be removed. One can make balls out of it in the hand and not be troubled by its sticking to the fingers. This lake is owned by the British government.

A BUTTERFLY FLOWER.

On the Island of Trinidad grows an epiphyte, or air plant, which bears a flower that exactly resembles a butterfly in color and form. The wind flutters it in a way to make the deception almost complete.

EUROPE.

GRUNTING FISHES.

Along the coast of Great Britain is found a species of fish called the gunnard, a bottom fish which has broad pectoral fins like fans. The young are beautifully colored, and look like butterflies in the water. When taken from the water the gunnard makes a grunting noise like that of a hog.

TREACHEROUS SANDS.

Off the east coast of Kent County, England, at an average distance of five and a half miles from the shore, are the famous Goodwin Sands, which extend northeast and southwest to a distance of ten miles. They are divided into two parts by a narrow channel. After the ebb of the tide they are treacherous and exceedingly dangerous. Many vessels have been buried beneath them, for the mass shifts about in a way to render charts uncertain. Lightships are used to some extent to warn mariners, as it is impossible to erect light-houses upon these shifting sands.

A FLOATING ISLAND.

In the south of Cumberland County, in the beautiful lake of Keswick, in England, is a remarkable island that floats on the water like a bladder. It consists of a mass of earth, an acre or less in size, and six or more feet thick. This is covered with vegetation, and the entire island is buoyed on the surface of the water by means of millions of air-bubbles.

A BONE CAVE.

About a mile eastward from Torquay, in Kent County, England, is a cavern celebrated for its bones of extinct and other animals. The bones are very abundant, and generally as white as snow, although a few are discolored. Bone tools have also been found, and scientists are much interested in the exploration of the cave. The stone implements and other traces of man that have been discovered in the cave seem to extend back to pre-Roman times.

A MARINE COLLIERY.

West of Whitehaven, England, are the Howgill pits, which extend more than one thousand yards under the sea and about six hundred feet below its bed. The pitmen work by the light of their lamps, with the roar of the ocean above their heads. Sometimes the sea breaks through the roof into the mine, and does much damage. A celebrated mine of this kind at Borrowstounness was destroyed by an unexpected high tide, which flooded it and drowned all the workmen.

FUCHSIA HEDGES.

In various parts of West Cornwall, in southern England, fuchsias grow on bushes ten or fifteen feet high, and in some places literally form hedges, which are covered with beautiful blossoms.

SIDEWALKS ON ROOFS.

The town of Chester, on the River Dee, in England, has a novel feature in its sidewalks, which are built on the roofs of the houses, and covered with galleries to protect the promenaders from the rain. The only unpleasant thing about these walks is that one has to descend and ascend at each cross street.

THE BIRTHPLACE OF WILLIAM SHAKSPEARE.

Stratford-upon-Avon, in England, is celebrated as the birthplace of William Shakspeare. The house in which he was born has been preserved, and even the very room in which he first saw the light is in its original state. In the building is an interesting museum of relics.

THE SCENE OF GRAY'S "ELEGY."

Stoke Pogis, five miles from Windsor, England, is noted as being the place where the poet Gray lived and was buried. The old churchyard in this place is the scene of his celebrated "Elegy, written in a country churchyard." William Penn, the founder of Pennsylvania, also resided in this town.

A MAGNIFICENT RESIDENCE.

Chatsworth, in England, the residence of the Duke of Devonshire, is probably the finest palace belonging to any private individual in the world. A two-thousand-acre park contains hundreds of deer. The palace is of quadrangular form, around an open court, in the center of which is a magnificent fountain representing the god Odin sitting on the back of a dolphin. The gardens of the establishment were laid out by a man who received for his work a larger salary than the President of the United States. The interior of the palace is rich with a wealth of tapestry, carvings, pictures, and works of art.

A BIG CLOCK.

The great clock on the House of Parliament, London, has four dials, one on each side of the square tower in which it is located. These dials each measure twenty-three feet in diameter. It takes half a day to wind up the striking part of the clock.

LONDON FOGS.

The fogs of London have an unenviable celebrity. In 1873, from December 8 to December 14, London was enveloped in a fog so dense that all business was stopped, and the few carriages that ventured out on the streets had to be preceded by torch-bearers, who could advance but slowly. Many lives were lost. The gas-lights, which were kept burning all the time, could hardly be distinguished a few rods away. The losses sustained by the interruption of business were immense.

IMMENSE DOCKS.

The St. Catherine Docks, near the Tower in London, England, are the largest in the city, covering twenty-four acres, eleven of which are water. When they were built twelve hundred houses were pulled down to make room for them.

A WIDE BRIDGE.

Westminster Bridge, of London, is the most elegant in that city. It is built of iron, and rests on stone piers. Its length is only about 1,160 feet, but it is eighty-five feet wide.

CANNON LAMP-POSTS.

The lamp-posts of the great London Bridge are made from cannon taken during the Peninsular war. The bridge is of granite, and cost $10,000,000. It is estimated that over 100,000 people pass over this bridge every twenty-four hours.

A VERY OLD CHURCH.

St. Martin's Church in Canterbury, England, dates back to the second century. It is partly built of Roman bricks, and is almost buried in a growth of ivy.

"THE TOY-SHOP OF EUROPE."

Birmingham, England, won for itself the name of "The Toy-Shop of Europe" when Charles II. came back from France to again take his throne. He started a fashionable rage for metal ornaments, and the city at once began to manufacture all kinds of metallic toys and decorations. People in those days called the city "Brummagem," instead of Birmingham, and after a time all false jewelry and ornaments were called "Brummagem ware."

A PECULIAR MINE.

Not far from Cape Cornwall, England, is the bluff promontory of Botallack. Veins of copper run along the cliffs into the sea, and are concealed beneath the water; but art has overcome nature, and a tram-road has been built down an almost perdendicular precipice, and miners' huts and lofty chimneys stand on the steep ledges at the mercy of every storm. The cliff is scaled by ladders, and one enters the mine by ladders until he is vertically 120 feet below the sea-level and horizontally 480 feet below the low-water mark. The brine oozes through the metallic ceiling, and the ocean roars like distant thunder in the ears of the miners.

THE ROSETTA STONE.

In the British Museum in London, England, is the celebrated Rosetta Stone, which was found near the Rosetta mouth of the Nile, hence its name. This stone is about three feet long and two feet and a half wide and ten inches thick. It is celebrated because it furnished Dr. Young with the clew for deciphering Egyptian hieroglyphics. The inscription on the stone is written in several different languages, one of which is the Greek and one Egyptian hieroglyphics; thus the one gives a key to the other.

KIT'S COTY HOUSE.

Kit's Coty House is a comlech, or rude structure made of unhewn stones—two erect ones supporting a flat one which weighs at least twenty tons—in Kent, England. Comlechs occur in various places in Europe, as well as in Asia and America. They are believed to be sepulchral monuments of an ancient people.

A QUEER FASHION.

In the reign of Richard II., of England, in 1390, it was the fashion to wear shoes the toes of which were from one foot to eighteen inches in length, with the points turned up and fastened to the garter by a gold or silver chain.

A WONDERFUL CANAL.

In the north of England, between Worsley and St. Helen's, is the most remarkable canal in the world. It is sixteen miles long and entirely underground. It is used to transport coal and to drain the Lancashire mines at the same time. Ordinary canal-boats are used, propelled by men who lie on their backs upon the loads of coal and push with their feet against cross bars, which are placed at regular intervals on the roof of the tunnel.

A REMARKABLE ANCIENT OPEN TEMPLE.

At Salisbury, England, are the ruins of one of the most remarkable of the open temples built by the early Britons for use in their Druidic ceremonies. It covered an area of 300 feet in circumference, and consisted of three concentric circles of massive granite bowlders, some of them twenty feet high, and weighing from eleven to seventy tons. These were connected by enormous flat stones perfectly fitted in their places. How these stones were placed in position has been the subject of much conjecture.

A BEETLE WITH A GUN.

The Bombardier Beetle of England is a military character. When roughly handled it discharges a fluid from its body diffusing a vapor like smoke, and making a report like that of a gun. Sometimes several of these beetles will attack a common foe, advancing, firing their guns, and retreating like well-drilled soldiers.

A PECULIAR MINE.

The Carclaze tin mine, near the town of Austell, England, is noted for its peculiar appearance and the singular manner in which it is worked. It is a vast crater-like excavation a mile in circuit, with almost perpendicular walls from 120 to 180 feet deep. It is entered by foot-paths, and is worn into many picturesque shapes by the action of the waters and the pickaxes of the miners. The stones are crushed by water-wheels in the mines. The whole business is performed within the hollow, and is not very productive.

A TOWN WITH A LONG NAME.

The Welsh language is noted for its long, unpronounceable words. On the island of Anglesia, North Wales, is a town the name of which is spelled thus: Llanfairpwllgyngyllgogreychwyrndrabwlltysiliogogogoch. The inhabitants, for convenience, call the name by the first two syllables, Llanfair.

AN INTERESTING VILLAGE.

The village of Shanklin, on the Isle of Wight, is interesting because of a natural curiosity that has few parallels in the world. A portion of its surface is called the undercliff, and consists of irregular terraces, sylvan dells, steep knolls, and a succession of the wildest and most beautiful scenery. This region is about half a mile wide and nearly seven miles long. Its under stratum is of absorbent earth, while the outside stratum

is of rock and chalk. Heavy storms have saturated the substrata, and in the course of time undermined the surface, thus producing landslips, which have dashed the land about and piled it up in picturesque forms. The Chine, also noted and of special interest to Americans, is a small stream of water which, falling over a soft sandstone ledge, has worn a channel in the rock nearly 200 feet deep and 100 wide. The vegetation along its sides is luxuriant. A gate incloses the Chine at each end. At the entrance is a small tower of stones, over which is an American eagle with "E pluribus unum" on his breast, and below the stars and stripes are the lines:

"Oh! traveler, stay thy weary feet;
Drink of this fountain, cool and sweet;
It flows for rich and poor the same.
Then go thy way, remembering still
The wayside well beneath the hill,
The cup of water in His name."

These lines were written by the poet Longfellow at the earnest request of the inhabitants of Shanklin when he visited the place in 1868.

THE GAP OF DUNLOE.

About eleven miles from Killarney, Ireland, is one of the most celebrated places in that country. It is a gloomy, narrow defile between rocks, which in places are over 3,000 feet high. This gap is four miles in length, and must be traversed on horseback or on foot. A small stream flows the whole distance of the chasm. Huge masses of overhanging rock darken the course, and make the way very gloomy. It is here that St. Patrick is said to have banished the last snake from Ireland.

BOG BUTTER.

In some of the bogs of Ireland is found a peculiar substance which in color and consistency resembles butter. It has evidently been formed by the decomposition of the peat, amidst which it is found.

INTERESTING RUINS ON A ROCK.

Cashel, a city 108 miles southwest of Dublin, Ireland, is noted for the Rock of Cashel, which rises abruptly from the plain to the height of about 300 feet, and has on its summit the most interesting ruins in Ireland. They consist of the remains of St. Patrick's Cathedral, Comach's Chapel, an ancient cross, and a round tower, built of freestone, and, like others of its kind in Ireland, is too old to have a birthday. The chapel is the oldest stone edifice in the country.

CLIFFS THAT BURN.

The water of the sea in certain cases destroys the rocks on its borders by combustion. On the western coast of Ireland the waves have sculptured the rocks into fantastic forms. Some years ago a large portion of them fell, exposing extensive quantities of alum and iron pyrites to the air and sea-water. Rapid oxidation took place, and set whole cliffs on fire. For weeks the rocks burned like a great coal fire, and sent up clouds of smoke. Heaps of scoria and brick are scattered along these cliffs, which are known as the Cliffs of Ballybunion.

BEEHIVE HOUSES.

Among the oldest architectural remains in Ireland are curious dome-shaped buildings of no great size or height, built of long, thin stones, arranged in layers overlapping one another, and converging to the top. Some of these buildings are in clusters underground. It is believed that they date back to the seventh or eighth century. Stone hand-mills, ashes, bones, and earthen vessels have been discovered in these houses. It is thought by some that they were the dwellings of priests.

GOLDSMITH'S "AUBURN."

Lishoy, in Ireland, near Lough Rea, is supposed to be the "Deserted Village" immortalized by Goldsmith. It is now generally known by the name of "Auburn."

BURSTING BOGS.

During a heavy rain in Ireland, the land of bogs, it is not uncommon for a quagmire to become filled with water like a great sponge, and to swell until it bursts, sending out a black stream of liquid mud, and overwhelming villages in its course. In the peat of Donegal, in 1833, several log cabins filled with peat were discovered at a depth of fourteen feet.

A PICTURESQUE RUIN.

Dunluce Castle, about two miles from Portrush, Ireland, is one of the most picturesque ruins in the United Kingdom. Its location, on an isolated rock one hundred feet above the level of the sea, is unique. It is connected with the mainland by a bridge less than two feet wide. A long, narrow cave extends beneath the castle, and may be entered by a small opening at low water.

QUAKING BOGS.

In parts of Ireland are large tracts of land which quake beneath the foot of the traveler, and are dangerous to travelers because of the water beneath. These quaking bogs were doubtless formed by the growth of plants on the surface of lakes and by accumulating sediments upon their floors. A plant called sphagnum grows without having its roots in the soil, and often spreads itself over a body of water entirely covering its surface, which in time becomes a quaking bog of peat.

A SLENDER BRIDGE.

At no great distance from the Giant's Causeway, near Ireland, is a singular chasm, sixty feet wide, which separates the Island of Carrick-a-Rede from the mainland. The bridge to this island is made of two cables three or four feet apart, upon which planks are lashed to make a floor 100 feet above the sea. By means of hand ropes the peasants cross this bridge in all weathers.

A CURIOUS ROCK.

In the neighborhood of Edinburg, Scotland, is a huge rock which exhibits a mass of strata arranged in a nearly vertical manner on one of its faces and resembling in appearance the ribs of an enormous giant. This rock is called "Samson's Ribs," and is worthy of the name.

A TALL CHIMNEY.

The great smokestack of the St. Rollox chemical works in Scotland is as tall as the great pyramid of Egypt, and although standing in a city which contains thousands of tall chimneys it overtops them all. It is said to be the highest chimney in the world.

ROCK BUTTER.

Near Paisley, Scotland, as well as in some other places, alum abounds in the rocks, which exude a mineral substance resembling butter in general appearance.

A WONDERFUL RESONANCE ECHO.

In Paisley, Scotland, there is a vaulted Gothic chapel which is described as having the finest resonance echo, perhaps, in the world. The chapel has but one door, and when that is shut the noise made by the echo sounds like distant thunder. When a musical instrument is played the echo sounds like many instruments all playing together.

A TOUCHING INSCRIPTION.

On the iron gate of the Jewish burying-ground in Glasgow, Scotland, are the following lines from the sweetest of Byron's Hebrew melodies:

"Tribes of the wandering foot and weary breast,
How shall ye flee away and be at rest?
The wild dove hath her nest, the fox his cave,
Mankind their country—Israel but the grave."

ALLOWAY KIRK.

Near the mouth of the Doon, in the parish of Ayr, in Scotland, is Alloway Kirk, an old ruined church celebrated in Burns's "Tam o' Shanter." Near the church is the cottage in which the poet was born, and a monument erected to his memory.

VITRIFIED FORTS.

Among the remarkable ruins of Northern Scotland are fifty or more forts, the walls of which show the action of fire. In some instances the material has been converted into masses of coarse glass. Some of these structures are surrounded by an outside circle of blocks of ordinary stone. It is generally believed that this vitrifaction was caused by the bonfires connected with the rites and customs of the ancient races of North Britain.

AN INTERESTING LOCALITY OF FOSSILS.

Dura Den is a small glen on the eastern coast of Scotland in Fireshire County. It has become famous for the beauty and number of its fossil fishes entombed in the sandstone. The fishes occur in clusters and in detached groups. Sometimes a hundred perfect specimens have been obtained from a single slab not more than five feet square.

ARTHUR'S SEAT.

Arthur's Seat, near Edinburg, Scotland, is a massive mountain over 800 feet high, in the form of a recumbent lion. It is a noted object described by Sir Walter Scott in his "Chronicles of the Canongate." This lofty, craggy, solitary hill, so near the great city, is in marked contrast with it. Its name is supposed to have been taken from the British Prince Arthur, who conquered the Saxons in this neighborhood in the sixth century.

A RUINED ROCK CASTLE.

A mile or more south of Stonehaven, on the Kincardineshire coast of Scotland, is a ruined castle situated on the top of a rock which is 160 feet high and covers an area of three acres. The rock overhangs the sea, and is separated from the mainland by a deep, dry chasm. It is approached by a winding path. This castle was at one time used as a State prison.

THE BURIAL-PLACE OF SIR WALTER SCOTT.

Dryburg Abbey, in Abbotsford, Scotland, is one of the most picturesque ruins in that country, and also the burial-place of Sir Walter Scott. His tomb, with that of his wife, is covered with a massive slab of granite, shaped so as to resemble two altar tombs. The poet's tombstone bears these words:

"Sir Walter Scott, Baronet,
Died Sept. 21, A. D. 1832."

Mr. Lockhart, son-in-law and biographer of the poet, lies at his feet, while his eldest son is buried at his right. An open railing in front protects the monuments. The ruins of the abbey are dressed in living green.

THE OLDEST INHABITED CASTLE IN SCOTLAND.

Dunevan Castle, on the Island of Skye, is said to be the oldest inhabited castle in Scotland. It is surrounded by the sea on all sides except one. Sir Walter Scott here composed his "MacCrimson's Lament."

THE RUMBLING BRIDGE.

About fifteen miles from Perth, Scotland, is a bridge which crosses a chasm eighty feet high, through which the river Bran rushes with so much fury that the bridge is said to rumble or shake, hence its name, Rumbling Bridge.

AN HISTORICAL CASTLE.

Thirty-five miles west of Edinburg is the town of Stirling, Scotland, noted for its fine castle, the former residence of the kings of that country. It is of quadrangular shape and stands upon a rocky eminence. It is now used for a barrack for soldiers. In the chapel of this castle Mary was crowned queen of Scots. James VI. was also baptized here. From here one can see twelve battlefields, including the one on which Bruce secured the independence of Scotland in 1314 by the great battle of Bannockburn.

A BLOWING ISLAND.

The Skerries, one of the Shetland Islands, has a deep chasm opening overhead and continuing underground for a long distance, and again opening to the sky in the middle of the island. During a storm or when the tide is high the water rushes through this aperture with a noise like the blowing of a whale.

THE LARGEST DIAMOND IN THE WORLD.

The largest diamond in the world is the Orliff, in the sceptre of the Emperor of Russia. It weighs 194¾ carats, and is cut in the rose form, with a flat face below, and resembles in shape the half of a pigeon's egg. It is said to have once formed the eye of an Indian idol and was stolen by a French deserter. It was purchased in 1772 from an Armenian merchant by Count Orliff for $450,000 and an annuity of many hundred dollars. It was presented by the Count to the Empress Catherine.

A MANY-TOWERED CHURCH.

The church of St. Basil, near the Kremlin, in Russia, is totally unlike all the other Russian cathedrals. It has at least twenty towers and domes, no two of which are alike. These towers and domes are of every

conceivable shape and color, and gilded and painted in a wonderful manner, each dome containing a separate place of worship. This church was erected by John the Terrible, and it is said that he put out the eyes of the architect that he might never build another like it.

THE REDEEMER'S GATE.

The Redeemer's Gate, one of the gates of the Kremlin, in Russia, is so called because over it is a picture of Christ, and no one is allowed to pass through the gate without uncovering his head. Even the Emperor is obliged to remove his hat, and should anyone attempt to rush through without observing the custom he would be arrested or in some way reminded of his mistake. It is said that the French tried to remove and destroy the picture, but were unable to do so as their ladders would break.

A BUTTER-COLORED TOWN.

Odessa, Russia, has been described in a few words as a "town of straight streets and butter-colored houses." It is built on a table land, which ends in bluffs, on the north and west coast of the Black Sea. A promenade extends along the face of the cliffs. Odessa is a commercial city, and the harbor is so deep that the largest vessels come close to the shore.

BARK SHOES.

The peasants of Russia wear shoes, or sandals, made of bark, and fastened to the ankles with strips of bark.

THE LARGEST ANNUAL FAIR IN THE WORLD.

The third annual fair at Lower Novgorod, Russia, which begins the thirteenth of July and closes the seventh of September, is the largest annual fair in the world. Men from every part of Europe, Asia, and Northern Africa gather in the city at this time. It is

said that a woman is rarely seen at the fair. During this fair 50,000 or more people live in boats on the water. Showy booths, restaurants, and tea-houses abound. All kinds of merchandise is exhibited for sale. Lower Novgorod has a population of about 45,000, and during the fair it is eight times its regular size.

WIND WITCHES.

In eastern lands thistles grow to be trees. On the steppes of Russia are many of these tree-like plants, the blossoms of which are of enormous size. When they are ripe the thistledown is caught up by the wind in great revolving masses and carried up into the air. It comes down and unites with other bunches, until often twenty or more hook together and hop along over the ground faster than a horse can run; then all of a sudden they rise into the air a hundred feet or more and appear like a great whirling wheel of feathers. These dancing domes are called by the inhabitants of that region "Wind Witches."

A MAGNETIC HILL.

In the Ouralian chain of mountains, in Russia, is the famous Wissokaya Gora, a magnetic hill 240 feet high, 250 feet broad, and 1,800 feet long. It rises from the midst of a plain, in the form of a broad, flat eminence of pure magnetic iron ore so hard that it requires to be blasted with powder. It is an open quarry, and is estimated to contain at least 600,000,000 cubic feet of iron ore.

A RUSSIAN SUPERSTITION.

The Russian peasants have a curious belief that every house contains a house spirit, which they describe as a little, dwarfed old man with white beard, yellow hair, and bright eyes, and dressed in a red shirt with a blue girdle on holidays, and at other times clothed in blue. They believe that this little man is

always about the premises, and that he usually hides behind the big brick stove. Many peasant families leave food on the table at night for this house spirit. They think he sometimes makes himself visible, and if not well treated will become very troublesome, and, perhaps, stop the breath of the sleeping members of the household, and thus produce nightmare.

DRINKING TEA WITH THE DEAD.

Over many of the graves in Russian cemeteries beautiful little houses are built of glass, marble, and iron, which are furnished with rugs, tables, and chairs. A photograph of the person buried beneath hangs on the walls, while mementoes of the departed are on the table. The relatives often visit these houses to drink tea with the dead, and some of the buildings are occupied for a few hours every day in the year. These visitations are regarded as a special mark of love to the dead relative or friend.

BIG FIELDS OF SUNFLOWERS.

On the northern border of Malo, Russia, thousands of acres of sunflowers are cultivated. A forty-five acre field of these gorgeous, round, golden blossoms with their faces all turned to the east is a magnificent sight. The sunflowers are sowed in rows, and, like corn, cultivated and hilled up with shovel plows. It may be asked why so many of these flowers are raised. The solution of the problem is found in the fact that the Russians habitually eat sunflower seeds as Americans eat peanuts. A good crop of sunflowers standing in the field is estimated at $25 an acre.

BUYING BEARS IN THEIR LAIRS.

Certain Russian peasants make a business of finding bear holes in the snow and selling their "finds" to sportsmen. The bears hibernate in winter and their

lurking places are revealed by breath holes made in the snow. The sportsman who buys a bear in his lair must run his risk of capturing the beast. If the bear gets away it is no fault of the bear-finder, and the sportsman must pay the price agreed upon.

SLEEPING ON STOVES.

In rural Russia each peasant's hut has a big, white-washed, brick stove, which occupies about a third of the room-space of the entire house. This is a favored spot on which the children, as well as their elders, delight to sleep, for the heat is not enough to greatly inconvenience one. In certain parts of Russia the peasants often take a vapor bath in the household oven in which the bread is baked.

RUSSIAN HOTEL PECULIARITIES.

A hotel in Russia, as a rule, is a very delusive affair. One engages a room and finds it contains but a bed-stead and mattress. Extra charges are made for sheets, pillows, candles, matches, towels, etc. It is the custom of the better class Russians to carry their bed-clothes with them when they travel. The court-yard of the country hotel generally contains several savage dogs which are chained in different places with long chains, and the stranger must be agile and wary to escape unharmed.

A PENDULUM-LIKE CRADLE.

The peasants in parts of Russia have curious cradles for their babies. A ring and staple are fastened in the center of the room and a pole thrust through the ring. At one end of the pole is fastened a cot, which resembles a cage. The other end of the pole is above the mother's pillow. When the baby cries, the mother reaches up and works the pole up and down or swings it to and fro, thus dancing the infant about at will.

A MILKY LAKE.

In the government of Novgorod, Russia, is a lake named Bieloozero, or the White Lake. It is elliptical in shape, about twenty-five miles long and twenty wide. During stormy weather the water looks like milk. This appearance is caused by the disturbance of the white clay of which its bed is composed.

A PECULIAR VAPOR.

Baku is the center of the great Russian petroleum trade, and here in the harbor where a great number of vessels are constantly loading and unloading the oil a film of petroleum continually covers the water a considerable distance from the shore. This is exceedingly dangerous, for a volatile inflammable vapor is constantly rising from the water and mingling with the air. Conflagrations have been caused by a spark igniting vapor of this kind, and many warnings have been given concerning the danger lurking around the vessels at Baku.

WOMEN WHO DO THE WORK OF MEN.

The women of Russia, as well as those in some other European countries, do two thirds of the manual labor. They sow and cut, gather up and bind the wheat and oats and cut the hay. The boys and men ride the horses while the women walk and carry the scythes, forks and rakes back and forth to the fields. They work from 3 o'clock in the morning until 9 o'clock in the evening. The men will not deign to gather up, bind or stack up wheat.

LAND OF THE THOUSAND LAKES.

Finland has been called the "Land of the Thousand Lakes," because lakes occupy more than twelve per cent of its area, and marshes at least twenty per cent. It is more abundantly supplied with water than any other country in the world.

A HARSH BATH.

The peasants of Finland have a bath-house near each settlement. This consists of a log room with a tiny door and window. Within the room stones are piled and heated, after which water is poured over them and a steam bath created into which whole families gather, each member carrying a little stick with which he beats the others. Often in the winter the peasants rush out from this bath and roll themselves in the snow.

PINE-BARK SALT.

The people in Lapland take the inner bark of the pine tree and divide it into several thin layers, which they dry in the sun and then tear into narrow strips and place in boxes made of the fresh outer bark of the pine tree. These boxes they bury in the sand for a day. They then build a fire of tree stumps over the place where the bark is buried. The next day they dig up the boxes and find that the bark is red in color and has a sweetish taste. They use this bark as we do salt, to season food.

THE FAMOUS ROCK OF LURLEY.

Near the famed Gulf of the Rhine called the Bante, in Germany, is the wonderful Rock of Lurley, which has the appearance of a falling ladder descending into the Rhine. Its one thousand granite steps or seats give it this appearance. There is a celebrated echo here which repeats fifteen or more times all that is said to it. This echo is truly extraordinary, and even the noise of a small boat crossing the river at this place is reflected back with a tremendous noise.

EVERLASTING CRAVATS.

Among the late novelties in manufactured articles in Germany are aluminum mineral cravats, which are advertised as "feather weight, silver-white wash goods that will wear forever."

STONES WITH A VIOLET PERFUME.

In Thuringia, Germany, upon the Harz Mountains, are found certain stones covered with a fungi called violet moss. These stones, when rubbed, emit a perfume like violets, which is increased when they are moistened. This perfume is due to the incrustation with which they are covered, which is of a reddish-brown or yellowish-green color.

AN ELABORATE BRONZE STATUE.

The bronze statue of Bavaria, in Munich, Germany, is the most elaborate of its kind in the world. It stands on a granite pedestal thirty feet high. The statue is sixty-six feet high, and the material of which it is composed is mostly cannon, taken in war from other nations. The figure holds in her right hand a sword twined with laurels, and in her left a wreath. She is clothed in flowing garments and a fur tunic. By her side is an immense Bavarian lion. On the day when the statue was raised, twenty-nine men and two boys were raised with it in the head. To the great astonishment of the people they emerged from one of the locks of Bavaria's hair, and descended to the ground by means of a long ladder.

THE LARGEST VASE IN THE WORLD.

In the museum of Berlin, Germany, is the largest vase in the world. It is of polished granite and is sixty-six feet in circumference. The block from which it was made was brought from a distance of thirty-two miles, and polished by steam engines. It represents incredible labor and expense.

A MEMORIAL OF FREDERICK THE GREAT.

At Potsdam, Germany, in the palace of Sans Souci, built by Frederick the Great, and in which he died, one can see the clock he used to wind up with his own hand, and which, strange to tell, stopped at just the moment he died.

A FAMOUS HISTORICAL WINDMILL.

Near the palace of Sans Souci, in Potsdam, Germany, is an old windmill famous in history. Frederick the Great, desiring to purchase one on its site in order to pull it down and extend his gardens, was refused by the miller, and beaten in a law-suit which the king brought against him. The king, instead of being angry, built the miller the present large mill, and, when afterwards importuned by the miller, who had met with reverses, to buy the mill and land, generously paid the man's debts, but said the old windmill should stand as a monument of Prussian justice.

THE TEMPLE OF FAME.

The Walhalla, or Temple of Fame, in Ratisbon, Germany, is an object of interest. It is situated on a high hill, and is constructed entirely of white marble, with an iron roof plated with copper, similar in style and size to the Parthenon of Athens. It was designed to contain the statues and busts of the most distinguished men of Bavaria. It contains over one hundred busts and many statues. It is 218 feet long, 102 wide wide, and 60 high. It is richly ornamented with blue and gold. The pavement is of various colored marbles, and the whole is lighted by ground glass windows, which are mostly in the roof.

THE FAMOUS GREEN VAULTS.

The royal palace of Dresden, Germany, is noted for its "green vaults," eighty rooms on the ground floor containing the most precious collection of jewels and other small works of art in the world. They were formerly hung with green tapestry, hence their name. The jewels in one room are estimated to be worth at least $15,000,000. In one room is a crucifix and two horses' heads executed by Michael Angelo. Gold and silver plate, antique gems, beautiful wood carvings, immense diamonds, and other small objects of great

value meet the eye at every turn. One of the greatest curiosities is the "Court of the Great Mogul," which consists of 138 small pieces of pure gold, carved and finished in the most exquisite manner, and worth at least $45,000. A pearl as large as a hen's egg may also be seen.

A CITY OF BOOKS.

Leipsic, or the "town of the lime trees," in Germany, is noted for its booksellers and publishing houses. There are over three hundred bookstores in the place, and over fifty printing houses. The type foundry business carried on here is the largest in the empire. The annual trade convention of the Booksellers' Exchange brings together the representatives of publishing houses, and booksellers, and buyers, from all over the world. Those in search of rare volumes and literary curiosities find this city a favorite resort.

A WEALTHY CITY.

Frankfort-on-the-Main, in Germany, is said to be the wealthiest city of its size in the world. If its wealth were equally divided among its inhabitants, each man, woman, and child would have about $5,000. It is stated that over 250 of its citizens are worth $3,000,000 or more each. The city is a great banking center.

A NOBLE PICTURE GALLERY.

The old Pinakothek, in Germany, is a repository of pictures, said to be the noblest in Europe. It contains over fourteen thousand paintings by ancient masters. The new Pinakothek, near by, contains a vast collection of paintings by the greatest of modern artists.

A PICTURE EXECUTED BY MOTHER NATURE.

In the duchy of Brunswick, Bielstein, one of the Harz Mountains, on the right bank of the Bode, Germany, is a singular cave. Its entrance is one hundred

feet above the bed of the stream. The cavern is divided into eleven rooms or chambers. On the wall of the ninth division is a picture executed by nature herself. It represents a tempestuous sea, with waves so natural that they seem to be tossing and rolling about.

GRAND PEAT BURNINGS.

In the heath districts of North Germany the inhabitants every spring set fire to the dry clods, in order to obtain later a harvest from the sterile soil. The smoke that rises from these fires is so great that it almost entirely obscures the light of the sun, and even at a distance of 150 miles gives the sky a gray tinge and causes the sun to assume a blood-red tinge as it verges toward the horizon. The people keep stirring the clods, which increases the smoke.

MINES OF AMBER.

Near the sea coast, in Prussia, there are mines from which great rounded masses of amber are taken. It is sometimes found in the form of stalactites attached to parts of trees. The mines are worked to the depth of one hundred feet. The Baltic coasts are the great sources of supply of amber. It is often cast on the shores by heavy storms.

A NOVEL FIRE-ALARM.

The cathedral of St. Stephan in Vienna, Austria-Hungary, has half way up its tower a watch station where a man stands with a telescope. When he sees a fire he can by referring to his chart of the city locate it exactly, and by the aid of the telegraph communicate with the fire-office, from which assistance is at once sent.

A WONDERFUL GROTTO.

The celebrated grotto of Adelsberg, Austria-Hungary, is considered the most magnificent in Europe. The roof of some of the chambers is too lofty to be

seen from beneath. The stalactites in places are so regularly clustered together as to resemble the nave of a Gothic cathedral. On Whit Monday every year the peasants give a ball in one of the largest chambers.

THE LOFTIEST CARRIAGE ROAD IN EUROPE.

The road over the Stelvio Pass in Austria-Hungary is the loftiest practicable for carriages in Europe. It was built by the Austrian government and is a wonderful piece of engineering. The summit is 9,045 feet above the sea.

A FAMOUS MOUNTAIN OF IRON.

The famous Erzberg, or Iron Mountain, of Austria-Hungary, although one of the most remarkable in the world, is seldom described. This mountain lies between the valleys of the Mur and the Enns, in a pass of the Styrian Alps. It is 3,000 feet high, and coated with a thick mantle of iron ore. This iron is not, as in most mines, concealed in the earth, but is on and near the surface of the ground. The mountain has been worked for a thousand or more years. It is covered with excavations and grottoes. It is, as it were, a mine turned inside out, for its operations are almost all above ground. The miners enjoy the grand Alpine scenery, and are not confined in dismal pits. It is estimated that the production is sufficient to continue for many thousand years at the present annual rate of 25,000 tons per year. On the top of the mountain is an immense iron cross, at the foot of which an annual thanksgiving feast is celebrated.

THE LARGEST OPAL IN THE WORLD.

The largest and finest opal in the world is in the Imperial Mineralogical Cabinet in Vienna, Austria-Hungary. It weighs seventeen ounces, and is irregularly cut. It is too large to be used as an ornament. It presents magnificent colors, chiefly red and green.

SULPHUR CAVES.

In Mount Budoshegy in Transylvania, Austria-Hungary, are some very remarkable sulphur caves. The lower part of the walls of these caverns are covered with incrustations of sulphur, and as one advances the heat becomes intense, the torches are extinguished and it becomes difficult to breathe. A hasty retreat is necessary in order to save one's life. Too much curiosity on the part of the explorer here is fatal.

SPRINGS OF FRESH WATER IN SALT MINES.

The most renowned salt mines of Europe are those of Wieliczka, on the northern borders of the Carpathian Mountains, in Austria-Hungary. The beauty of these underground crystal palaces has been often described. It is a remarkable circumstance that springs of sweet, fresh water are found in these mines, flowing close by great masses of salt. This is due to the fact that the salt is in masses in the clay of the mountains, and that in places the water filters from the top without admixture with the salt.

A VANISHING LAKE.

Lake Czirknitz, in Carniola, Austria-Hungary, is remarkable for the fact that its waters occasionally disappear for several months, leaving its bed in a condition to yield luxuriant herbage. The peasants often sow and reap a small crop of buckwheat on the land before the waters return. The waters of this lake are by no means regular in their disappearance—sometimes for five or six years they do not disappear at all. The bed of the lake is full of deep caverns and fissures and is composed of limestone. This lake has been dry for a year at a time, and it has been known to overflow the country. The return of the waters is sudden. The basin is sometimes filled in twenty minutes.

A PORCELAIN MUSEUM.

In the town of Sevres, France, is a museum which contains specimens of porcelain from all parts of the world. In the show-rooms are tea-sets worth $4,000 or $5,000 each. Near the museum is an establishment which makes the finest porcelain of its kind in the world; it has been in existence over 150 years.

THE LARGEST LIBRARY IN THE WORLD.

The National Library of Paris, France, consists of an entire block of buildings containing the largest and finest collection of books in the world. The book-cases placed in line would make about forty miles of well bound books of the best editions. It contains 1,300,000 books and over 100,000 valuable manuscripts, together with a vast collection of rare engravings, coins and metals.

A CITY LIKE A LACE COLLAR.

Bordeaux, France, on the western bank of the Garonne, is in shape much like an old-fashioned lace collar. The squares made by the streets and avenues represent the meshes and threads of the collar.

THE MORNING BATH OF A GREAT CITY.

For an hour every morning the water is turned on in Paris, France, and an army of housemaids may be seen giving the city a bath with their brooms. The traps of the sewers are opened and all the filth of the previous day is swept underground, thus making Paris a cleanly and healthy city.

A BLACK TOWN.

Agde, a town of France, on the Herault, is popularly called the "Black Town," because its houses are built of black basalt, and have a grim, gloomy appearance, notwithstanding their pleasant location.

A PICTURESQUE COSTUME.

The valley of the Bear, in France, is one of the most beautiful in the Pyrenees. The inhabitants are noted for their picturesque costumes. The women wear scarlet hoods, black bodices with scarlet fronts, and black woolen skirts falling just below the knees, bordered with broad blue ribbons, white stockings, made without feet, so as partly to cover the top of the shoe, like leggings. The young men wear scarlet jackets with white vests, brown knee-breeches with colored silk sash and white stockings. The old men wear brown jackets.

A BURNING MINE.

At Brule, near St. Etienne, in France, is a coal mine which has been on fire for ages. The soil above the mine is barren and the region has a volcanic aspect. Dense sulphurous fumes escape through crevices in the ground and the soil is calcined in places.

REMARKABLE CHEESE CELLARS.

The town of Roquefort, in France, is noted for the delicious flavor of the cheese it manufactures. This cheese is made in vast cellars excavated on the northern slope of a great chalk plateau. These cellars communicate with caves or fissures in the rock from which currents of cold air are constantly blowing, thus lowering the temperature in a way to greatly help in the manufacture of good cheese.

SUBTERRANEAN MUSHROOM BEDS.

In the environs of Paris, at Arcueil, Montrouge, and other places in France, are extensive catacombs in which, seventy or eighty feet below the surface, edible mushrooms are cultivated. In one of the caves at Montrouge there are six or seven miles of mushroom bedding. The temperature of these spacious caverns is nearly uniform all the year. The beds are covered

with a layer of white earth and kept well watered. They are about twenty inches high, kept very neat and smooth, and ranged along the sides of the galleries. When ripe, the mushrooms are gathered and hoisted from below by a pulley and rope. The industry is a profitable one, and the products of these ancient quarries are in great demand in Paris, France.

HILLS THAT MOVE.

On the southwestern coast of France, between Bordeaux and Bayonne, the sea throws up enormous quantities of sand which the westerly winds pile into hills parallel with the coast and with one another, and of all altitudes, some as high as 250 feet. These hills are not like ordinary elevations, immovable, but travel inward at the rate of from three to six feet a year. When they approach a village, the people are obliged to tear it down and rebuild at a distance, or see their houses buried in sand.

WOODEN SHOES.

The peasants of the greater part of France, as well as those of some other European countries, wear shoes made of wood. They are generally made by hand, of poplar or basswood, and sometimes skillfully decorated with delicate carvings of flowers. If the shoes are for a wedding present they are carved with the names of the bride and groom, and the date of the wedding. These gift shoes are kept as precious souvenirs, and only worn on state occasions. Some peasants have a legendary song that tells of a country maiden scorned by many because of her wooden shoes, but at length taken by the king as his queen. The last stanza runs thus:

"So I was not quite so plain, with my wooden shoes,
With my wooden shoes,
But the king, from his throne, came to take me for his own,
With my wooden shoes."

GALLERIES OF BONES.

The catacombs of Paris, France, although historically less interesting than those of Rome, are remarkable places to visit. They are ancient quarries, of modern date as sepulchers, yet they contain more than 3,000,000 bodies, the bones of which were transferred from the cemeteries of Paris. These bones are piled up along the sides of the galleries in symmetrical rows.

A GARDEN WITH WALLS OF ICE AND SNOW.

Far up on the side of Mount Blanc, in Switzerland, is what is called the "Jardin," or "garden," a triangular rock with a surface of seven acres or more in extent, walled in on every side by ice and snow. The rock is covered with soil from which in August of every year wild flowers spring in abundance at a height of about 10,000 feet above the sea.

SUDDEN CHANGES OF LEVEL IN A LAKE.

Lake Geneva, in Switzerland, is subject to sudden changes of level, which consist of almost instantaneous rising and falling of the water of the lake. This phenomenon is called the "syches," and seldom lasts over twenty minutes. The rise of the water is often as much as five feet above the usual level. It generally occurs in the spring or autumn, and is supposed to be due to atmospheric pressure.

A HOTEL NAMED AFTER GIBBON, THE HISTORIAN.

The principal hotel in Lausanne, Switzerland, was named after Gibbon, the great historian. A portion of the land attached to the hotel was the former garden of Gibbon, and it was where, on the 27th of June, 1787, between 11 and 12 o'clock at night, he wrote the last line of the last page of his celebrated "History of the Roman Empire."

A SPRAY WATERFALL.

The falls of Staubbach, Switzerland, are precipitated from such an immense height that the water is broken into spray, which resembles dust, long before it reaches the bottom.

A GAUNTLET OF ICE.

The Rhone glacier in Switzerland is in shape like a glove with the palm downwards, and the fingers crooked and close together. It has been called a gauntlet of ice, which King Winter centuries ago threw down in defiance to the sun, and which the sun yearly strives in vain to lift on the point of his glittering spear. It is many miles broad at its base, more than 2,000 feet high, and fills the whole valley between two mountains, running back to their summits. The Rhone issues from the foot of this glacier.

A LANDSCAPE SEEN THROUGH WATER.

The Giessbach Falls are considered the most beautiful in Switzerland. They consist of seven cascades which break through shrubbery. Behind the second fall is a grotto from which visitors can look through the water as it dashes over the rocks and see a beautiful landscape beyond, which presents a curious appearance thus viewed.

A TERRIBLE LAND SLIDE.

September 2, 1806, a large portion of the side of Mt. Rossberg, in Switzerland, slid from its position and plunged into the valley below, burying the greater portion of four villages and crushing nearly 500 human beings. The tract of land that thus slid from its moorings was 100 feet wide, three miles long, and 100 feet thick. All that was left of the village of Goldau was the church bell, which was found over a mile from its former locality. The anniversary of this sad event is commemorated in Arth by a religious ceremony.

FLOATING WASH-ROOMS.

The traveler who visits Geneva, Switzerland, is amused to see washerwomen pounding and cleansing their clothes in boats on the River Rhine. The rushing stream is very convenient for rinsing the clothes.

A PALACE FOR THE ICE KING.

On the Rothhorn, in the canton of Berne, Switzerland, is a vast ice cave called the "Cave of Sheep," because when a sudden storm comes up the sheep seek the shelter of this cave, never going, however, so far as the place where the ice begins. The way from the entrance is covered with loose stones for quite a distance, then they begin to be intermingled with ice, and at length the entire cave is covered with ice. Great crystal columns of ice rise from the floor and masses of icicles hang from above. An ice cataract meets the view and plunges into a gulf that seems to have no roof and no end. The exploration of this cave is a slippery process and not free from danger. The ice is fretted and festooned with great delicacy and the cave seems a fit palace for the Ice King himself.

PECULIAR BATHING.

Lenk, in the canton of Valais, Switzerland, is celebrated for its baths, which are peculiar for the length of time the patients remain in them. The water is impregnated with minerals useful in diseases of the skin, and the patients, clad in long woolen dresses, sit in the baths up to their neck for the space of six or eight hours a day, beguiling the time with conversation and reading.

TUMBLING MOUNTAINS.

In the Bernese Alps, Switzerland, between Berne and Valais, is a range of limestone mountains, the lower beds of which are so soft and shaly that the filtration

of the water from the glaciers on the northeast wear away the foundations and the peaks tumble into the valley below. Three have thus fallen, destroying many people, cattle and houses. But few peaks remain, and those threaten soon to fall.

TIMBER SLIDES.

Some of the finest timber in the world is obtained from the forests of Switzerland. It is found in places almost inaccessible, and where it is impossible to make roads, and so the people have constructed inclined planes, by means of which the timber can be slid down to the lakes. The Slide of Alpnach is made of about 25,000 large trees, deprived of their bark and fastened together in a way to make a trough about six feet broad and from three to six feet deep. Small rills of water at different places are made to flow into it to diminish the friction. The slide is sustained by about 2,000 supports. It is carried over precipices and along the side of hills. Down this incline the trees are shot to the plains below. Workmen are stationed all along to signal those above. A tree comes shooting down every five or six minutes, with a force so great that if one tree strikes another it splits it in two as if it had been struck by lightning.

THE STEEPEST RAILROAD IN THE WORLD.

Mount Pilate, in Switzerland, has up its sides a railway which is, probably, the steepest in the world. It rises forty-two feet to every one hundred feet of progress. The upper terminus is 6,900 feet above sea level. The road goes to within 210 feet of the highest altitude, which is inaccessible. The foundation of the road is solid masonry covered with granite slabs. Stout arches span the ravines. The upper structure is made of iron and steel, fastened every few feet to the foundation by strong bolts and clamps. The track like the usual upgrade road has two outside rails with a double steel-cog rail in the center into which cog-wheels of the car

play, so that the train can be brought to a standstill any moment. The engine and one coach of four sections make up a train. The floor and seats are made so as to be on a level all the time.

HOUSES THAT LEAN IN EVERY DIRECTION.

Amsterdam, in the Netherlands, is built on piles driven into a peat bog which has firm clay below. Many of the buildings in this city lean to the right, others to the left, some forwards and some backwards. The inclination of some is very slight and of others very great. This crooked state of affairs is due to the sinking of the piles on which the houses are built.

MIRROR WINDOWS.

Nearly all of the finest houses in Rotterdam, in the Netherlands, have mirrors on each side of the windows. These reflect in opposite directions, so that the people in the houses can see all who are passing in the street, and remain themselves unseen.

THE HOUSE IN THE WOOD.

Near the Hague, in the Netherlands, in the midst of a grand old forest, is a royal palace called the "House in the Woods." It is noted for its many fresco works by the celebrated Antwerp painter, Peter Paul Rubens. It also contains much beautiful tapestry.

WATER AND FIRE FOR SALE.

Among the articles of merchandise on sale in the Netherlands are boiling water and red-hot turf. These articles are bought by the poorer classes for the preparation of their tea and coffee. These commodities are generally sold in cellars which bear the sign: "Water and Fire for Sale."

IMMENSE QUARRIES.

The quarries of St. Peter's Mount, near Maestricht, in the Netherlands, are probably the most extensive in Europe. They are worked for the white limestone of which they are composed, and which has long been used for building purposes and for a fertilizer. These caverns extend for miles into the depths of the mountain, and many a poor wretch has lost his way and his life in this underground labyrinth. These caverns were once the scene of a bloody fight between the French and the Austrians. In the calcareous turf, of which they are composed, valuable petrifactions have been found. Here, in 1770, the skull of a giant lizard, twenty feet long, was discovered.

NOISY SHOES.

The little Dutch children of the Netherlands wear heavy, clumsy, boat-shaped wooden shoes which make a strange clicking sound on the pavements. When a line of little Dutch boys play leap-frog they make a tremendous rattling noise as they strike the hard, brick-paved street. Their shoes are called "Kloompers."

A HILL OF PURE ROCK SALT.

Near Cordova, Spain, is a hill 500 feet high, of absolutely pure rock salt, so hard that it has to be blasted. This hill is the only one of its kind known in Europe. The salt is so hard and beautiful that vases, crosses and other ornamental articles are made from it.

A GENEROUS SALUTATION.

The peasants in Spain salute by offering a part of the bread they always carry with them. It is not the proper thing to accept the proffered gift, therefore the salutation is not so generous as it might at first seem to be. To be polite the bread must be declined with thanks.

THE MOST ANCIENT MERCURY MINES IN THE WORLD.

The Sierra Morena, or Black Mountains of Spain, are not only noted as the scene of the exploits of Don Quixote, but also for the famous quicksilver mines of Almaden, which are said to be the most ancient in the world. One enters the mountain by means of a tunnel walled with solid masonry and branching into several galleries and halls. The mines are very rich and but little more than a thousand feet deep. The ore is of a dark red glittering color and sometimes in crystalline masses. Often when the miners are at work balls of quicksilver as large as pigeon's eggs roll from the crevices and leap along the floor. These are not lost, for the rubbish on the floor is carefully collected. Working in these mines is injurious to the health. Formerly criminals only were employed, but now free men are hired, well paid, and allowed to work but six hours a day. Most of these die at an early age; those who live to be forty-five years old become accustomed to the effects of the poison and may live to be sixty or seventy.

A REMARKABLE WEATHER-COCK.

In Seville, Spain, is a cathedral that has on its tower one of the most remarkable weather-cocks in the world. It is called the Giralda, and is in the form of a female figure in bronze, which veers about with the slightest breeze. The beautiful tower of the Madison Square Garden in New York was modeled from that on this cathedral.

A SHELL-SHAPED DOME.

The famous cathedral at Cordova, Spain, was once a Mohammedan mosque. In front of the sacristy at the south end is a sanctuary which has a dome fifteen feet in diameter, carved from a single block of marble and in the form of a scallop shell.

A LABYRINTH OF COLUMNS.

In the cathedral at Cordova, Spain, is a perfect labyrinth of columns of all styles of architecture. They were taken from various ancient temples all around the Mediterranean Sea.

THE WHITEST CITY IN THE WORLD.

Cadiz, Spain, has been compared to an "island of plaster." It is bathed on all sides by the sea, and joined to the main land by a narrow isthmus. It is thus described by a noted writer: "As you approach it everything seems whiter and whiter, for this is the whitest city in the world. In the houses, within or without, their courts, the walls of their shops, the stone seats, pilasters, even the most remote corners and darkest houses of the poor, or most unfrequented streets, are all white. No servant who does not understand whitewashing is received in any family. From the midst of the buildings as from the sea it is milk white. Every house is closed at the top by a terrace, surrounded by a white-washed parapet. From almost all these terraces rises a small tower, white, too, which in turn is surmounted by another terrace-cupola or species of sentinel box—everything white."

AN ARTISTIC COSTUME.

The Valencian peasants of Spain wear a very artistic costume. The usual dress of the men is a full white shirt, a variegated waistcoat of velvet, open at the chest, zouave trousers coming to the knee, a red or blue sash about the waist, white leggings which show the bare knee, rope sandals, and a white or colored handkerchief twisted about the head, upon which is cocked a little velvet hat. A gay scarf is generally flung over the shoulders.

A DRAGON SPIRE.

In Copenhagen, Denmark, near the Christianborg Palace, is the Exchange building, which is of red brick and very picturesque in appearance. Its spire is very peculiar and an object of interest to all who visit the place. It is 150 feet high, and formed of three marvelous dragons with their tails twisted together high in the air.

A SUBMERGED RAILWAY.

Near Bilboa, Spain, is a railway under water. It runs down a sloping shore into the ocean and is used for the purpose of shipping iron ores. A tower-like iron car on wheels is used to convey the ores to the vessel. The wheels of this car are always under water. As soon as the cargo is shot into the hold of the ship the car returns to the shore automatically.

AN OLD CATHEDRAL.

The cathedral of Oporto, Spain, is a very odd piece of architecture. Its decorations are of the hobgoblin order. Fierce griffins leer from almost every cranny and nook and ugly looking serpents are twined around the pillars. Within are wonderful blue tiles in front of the cloister containing pictorial illustrations of the "Song of Solomon."

A FOREST OF WINDMILLS.

Zandam, in the Netherlands, on the River Zoan, is an important manufacturing town. The motive power by which the wood is sawed, the grain ground, and the other work performed is mostly furnished by windmills. So many of these have been built that the town itself at a distance has the appearance of a forest of windmills.

A TOWN THAT EXPORTS GINGERBREAD.

Deventer, a thriving town fifty-five miles from Amsterdam, in the Netherlands, exports annually many thousand pounds of a kind of gingerbread called Deventer Koek. This gingerbread is celebrated throughout the Netherlands as well as in other parts of Europe.

A TINY FOE.

At the beginning of the eighteenth century half the coast of the Netherlands was in great danger of annihilation from the attacks of the Teredo, a little marine animal that riddles submerged wood.

THE LARGEST BUILDING IN THE WORLD.

The new Palais de Justice, in Brussels, Belgium, is the largest building in the world. It is an immense mass of sculptured and polished marble, covering 270,000 square feet and costing over $10,000,000. It has a marble tower over 400 feet high.

A NOVEL PUNISHMENT FOR DRUNKENNESS.

In Belgium the individual who is arrested while drunk is shut up in the station-house until sober; he is then compelled to sweep the public streets for two hours. The ignominy of this exposure to the public gaze is generally effectual, and individuals are rarely punished the second time.

STRANGE ASSEMBLIES.

The castle of Fredericksburg, in Denmark, has a peculiarity often mentioned by travelers. Every afternoon at six o'clock the rooks from a neighboring forest fly to this building and blacken its roof for about a quarter of an hour and then quietly return to their place of abode.

A FAMOUS ROUND TOWER.

In Copenhagen, Denmark, is a famous round tower built by Christian IV. It was built for an observatory and is now used for that purpose. It consists of two hollow cylinders with a spiral inclined plane between them extending from the street to the top. It is said that in 1716 the wife of Peter the Great ascended this plane in a coach and four.

A STRANGE LANDMARK.

In North Jutland, Denmark, the sands encroach so on the land that they have driven back the villages, and in one instance covered a church, all but the steeple, which forms an important landmark to mariners.

A CITY ON THE BED OF THE OCEAN.

Under the water of the Bay of Setubal, off the coast of Portugal, is a large city, which was evidently overwhelmed by some earthquake, and thus covered by the sea. One can look down from the surface of the water and see the houses and streets below. The city is supposed to be Catobriga, of which but little is known. Its ruins have been visited by divers. They say the floors of the houses are laid in mosaics, and nearly every house has a bath-room; also that traces of a high civilization are scattered all through the submerged city.

AN ISLAND TO BE ADMIRED AT A DISTANCE.

In Lago Maggiore, the largest of the lakes in Italy, is the Isola dei Pescatori, a very picturesque and beautiful island; but it should be admired at a distance, for its inhabitants are all fishermen, and the rank odor of decayed fish dispels the illusion of loveliness, as one approaches. One traveler says: "There are places which you enter full of romantic enthusiasm, and escape from with a shudder. Instead of raising your hands in admiration, you employ them in holding your nose."

THE LARGEST OIL PAINTING IN THE WORLD.

In the Ducal Palace of Venice, Italy, is the largest oil painting in the world. It hangs in the great Council Hall. Its subject is "Paradise," which is also its name. It was executed by the artist Tintoretto.

THE LARGEST DOME IN THE WORLD.

The Duomo, or cathedral, of Florence, in Italy, is an edifice which, the builder said, should be the loftiest and most sumptuous that human invention could devise or human labor execute. Its dome is said, by some writers, to be the largest in the world, although that of the Mosque of St. Sophia, in Constantinople, claims the same distinction. The interior of the cathedral is bare of enrichment or decorations, but the arches and pillars, immense dome and beautiful windows in their simple grandeur, impress the mind with awe.

SQUIRTING CUCUMBERS.

On the waste ground outside of most southern cities, especially those in Italy, the soil is thickly covered with a trailing vine that bears a fruit in shape and appearance like a common cucumber, only it is covered with hairs. If this plant is irritated, the fruit squirts out its entire central part, leaving a hollow shell behind. The juice is bitter and nauseous, and stings the eyes and nostrils like red pepper. Thus the trick of squirting is protective, and also serves to scatter its seeds in every direction.

A BUILDING THAT IS A MASS OF STATUES.

In Pisa, Italy, is a beautiful little edifice called San Maria della Spina, which is "so covered, externally, with statuary, and figures in *alto relievo*, that hardly an inch of naked wall can be seen, so that it looks not like a building, but like a solid mass of white-robed saints and angels."

THE INTERIOR OF THE LARGEST CHURCH IN THE WORLD.

St. Peter's Church, the largest in the world, in Rome, Italy, has been often described. The effect of the first sight of the interior on the mind of a stranger is thus truthfully pictured by a traveler: "It is a familiar fact that the interior of the church does not, at first sight, seem so vast as it really is. The statues and ornaments, which one naturally takes as standards of measurements, are themselves of unusual proportions. The angels in the Baptistery are enormous giants, the doves colossal birds of prey, and it is only by observing the living, moving figures that we begin to get an idea of the immensity of the edifice."

A STRIPED CATHEDRAL.

The cathedral of San Lorenzo in Genoa, Italy, presents a very peculiar appearance from without, as it is formed of horizontal stripes of white and black marble, arranged alternately. It has but one tower. The interior is decorated with paintings, gildings and carvings.

A HIGH ROOF.

Padua, in Italy, contains a building known as the Palazzo della Municipalita, which is remarkable for its high roof—said to be the largest in the world unsupported by columns. It towers far above all others near, and gives the building a most singular appearance. The interior is dark and gloomy. It contains pictures, busts, monuments and other objects of interest.

POVERTY IN MARBLE HALLS.

Carrara, Italy, famed for its pure white marble, is a small town of world-wide celebrity. Marble is the cheapest material to be had in this place for building purposes, and hence one finds here, in even the meanest houses, marble floors, marble chimneys, slabs, and marble doors and window frames, while the inhabitants of the houses, perhaps, live in squalid poverty.

A WIND CAVE.

Near Terni, in Italy, is a celebrated Æolian cavern. At its entrance is a gate, through the crevices of which the wind issues with a rustling noise. In the grotto itself the current of air is strong enough to extinguish a torch. This cave has been put to an ingenious use. The owners of neighboring villas have connected certain of their apartments with the grotto by means of leaden pipes, and in sultry summer days an agreeable coolness is thus secured.

A FOUNTAIN ISSUING FROM A PALACE.

The Canti Palace in Rome, Italy, is remarkable for the novel and peculiar feature of having a wide fountain pouring its waters from the lower part of the front side of the building. Various statues, Corinthian columns and pilasters adorn the edifice. The entire structure is a wonderful work of art. On the extreme upper part is an inscription to Pope Clement XII, on each side of which are two statues. The papal arms surmount the whole.

A NOTED GRAVE IN A RIVER BED.

Near the town of Policastro, in Italy, is the River Busento, a small stream, memorable because its waters were turned aside that a grave might be dug in its bed for the great Alaric, a Gothic chieftain who extended his ravages over Italy. After his burial the waters of the river were let back to their former channel.

A LAKE THAT THUNDERS.

Lagodi Amsancto, a small lake at the entrance of a mountain valley, about fifty miles from Naples, Italy, is not calm and placid like most lakes, but over the greater part of its surface is a continual bubbling motion which produces a noise like distant thunder.

THE GREAT ROCK OF ITALY.

Monte Carno, or the great rock of Italy, is the highest summit of the Apennines. It has an elevation of over 10,000 feet.

HAY BATHS.

The peasants of Tyrol, Italy, have a peculiar way of bathing. They take newly mown, short mountain hay, partly dried, and pile it up in heaps. They then divest themselves of their clothing and cover themselves to the neck in this hay. This makes them perspire freely, and all that is necessary then to do is to dry themselves thoroughly with a towel. Some people can not endure this bath, it has such a powerful effect on the vital functions.

AN ANCIENT SEWER.

The Cloaca Maxima, or great sewer of ancient Rome, Italy, is a wonderful work of masonry. It was built by the fifth king of Rome about 150 years after the founding of the city, and has been in existence for twenty-four centuries. It was made to drain the marshy ground between Palatine and the Capitoline. It is stupendous enough to be the work of giants. It has remained intact while wars have raged above it, earthquakes shook the ground, and empires and republics flourished and passed away.

THE ENCHANTED ISLANDS.

In the Bay of Tosa, which is the western arm of Lake Maggiore, in northern Italy, is a group of small islands called the Borromean Islands, from a wealthy family of that name who own the rich estates in the neighborhood. They are also called the Enchanted Islands, from their beauty. They are terraced gardens from which the perfume of tropical flowers is wafted over the lake. One of these islands is crowned by a castle, and another by a colossal winged unicorn—the armorial device of the Borromean family.

A GREEN GROTTO.

On the Island of Capri, on the south side of the Bay of Naples, Italy, is a sea-cave of remarkable beauty. Its appearance from the entrance is of the intensest emerald green.

A BLUE CAVE.

On the Island of Capri, in the Bay of Naples, Italy, is a sea-cave which is a fit dwelling place for the mermaids. This cave was discovered by two artists who were swimming in the Bay. The light has to penetrate a depth of water before it enters the cave, which has a water floor. The entrance is just above the surface of the sea, and the walls of the cavern reflect the brightest blue. Like the green grotto near, it is remarkably beautiful.

A LAVA CITY.

Catania, Sicily, is made of lava. The houses, the mole which protects the harbor, the furniture in the houses, the toys of the children, and even the soil of the gardens, are all made of lava.

A PUMICE STONE ISLAND.

The soil of the island of Lipari, near Sicily, is composed entirely or pumice stone, and is the greatest mine from which Europe and America obtain supplies of this useful article.

A TELEPHONE CAVE.

The Ear of Dionysius, in Syracuse, Sicily, is a cave, or prison, in a solid rock, shaped like the letter S, and narrows gradually toward the end. A groove runs along this cave and acts as a telephone, collecting the sounds of voices, so that by applying the ear to the end of this groove whatever is said in the cave can be heard by the listener. The tyrant Dionysius incarcerated suspected persons in the cave, and then with his ear to the groove listened to hear their conversation in order to see if his suspicions were correct.

A RUMBLING WELL.

At Sciacca, a city of Sicily, is a remarkable well, at the bottom of which a curious subterranean noise is continually going on. Its rumbling resembles that of a rushing cataract or a torrent of rain. The cause of this noise is not certainly known.

SULPHUR EXTRACTED FROM THE ORE BY NATURE.

Sicily is noted for its numerous sulphur pits. In 1787 the sulphur mine of Sommatino, which is on the right bank of the Salso Valley, by an accident took fire and for two years raged incessantly, causing its complete abandonment, to the great discouragement of the owners. At length, however, an explosion occurred and a stream of melted sulphur poured from a cleft in the mountain into the river. The result was the deposit of a mass of pure brimstone, amounting to 40,000 tons, and which made the owners of the pit wealthy.

A CAVERN CITY.

Between Modica and Spaccafurno, in Sicily, is a narrow gorge called Val d'Ispica, the walls of which are pierced with chambers about twenty feet long, six high, and six broad, originally excavated to serve as dwellings. Luxuriant vegetation shades the entrance of the grottoes. A few of the rooms are still occupied by shepherds. The houses have doors and windows but no ornamentation. One of the dwellings is three stories high, has flights of stairs, and is in a good state of preservation. Several mortar-like troughs in the rocks give evidence that they were used for the purpose of pounding corn.

A REMARKABLE MUD VOLCANO.

Five miles north of Girgenti, in Sicily, is the remarkable mud volcano of Macaluba. It is a conical-shaped

hill, the summit of which is a mud plain half a mile around. It is in constant agitation. From time to time the hill has alarming convulsions, sending a great spout of mud and stones two or three hundred feet into the air. No heated matter of any kind is sent out of this volcano.

A NATURAL LIGHTHOUSE.

Stromboli, a volcano in a constant state of illumination, on an island in the Mediterranean Sea, is a natural lighthouse. Its eruptions are rhythmical and comparatively harmless. The olive groves near have never been injured by streams of lava. At intervals of five minutes or less, explosions occur, sending out steam and ashes, sometimes to a distance of thirty miles.

WHITE ISLAND.

Leucadia, or "White Island," in the Mediterranean Sea, is so called because of its cliffs, which are of glittering white chalk, presenting a curious appearance.

A FOREST OF ORANGE TREES.

The orange trees of Milis, Sardinia, are so abundant and so near together that they form a veritable forest. The oranges hang in clumps from the trees, making them look as if gilded. When the oranges are gathered the perfume that fills the air is perfectly intoxicating. The cloths spread under the trees to catch the beautiful fruit look like "cloths of gold" when covered with the yellow harvest.

WALKING MONUMENTS.

The women of Dalvino, Turkey, wear a peculiar style of dress. It consists of a long, white wrapper which envelops the wearer from head to foot, making her look like a walking monument.

A FIRE TOWER.

On the very highest point of the hills on which Constantinople, Turkey, is built is a lofty tower in which a guard is constantly kept to watch for the breaking out of fires. The private dwellings in the city are mostly of wood, and fires are frequent and destructive. When an accident of this kind occurs the guard beats an immense drum at the top of the tower and shouts: "Vangar" (Fire)!

SPINNING MEN.

The dancing dervishes of Turkey wear long, white, full petticoats and high, light-brown conical hats. They begin their ceremonies by marching, and then start off whirling round and round like a top, each keeping in his own orbit and never touching the other. It is a ridiculous sight to see these tall men spinning round and round with their arms over their heads and their skirts extended like so many fire extinguishers. This is a religious ceremony, and continues until the men drop exhausted.

HOWLING MEN.

In Constantinople, Turkey, one may see howling men as well as spinning men. The howling is a religious ceremony. A number of dervishes, as they are called, seat themselves upon dark mats upon the floor of a temple or room prepared for the ceremony. They begin by chanting, then one leads off by means of low cries in which all join, the sounds increasing in power until they sound like the growling of a pack of dogs. They all rise, sway their bodies backward and forward, loosening their hair, which is long, and then begin a different form of emotional expression. The clash of musical instruments mingles with the most terrific howls and shrieks until all are worked into a frenzy, and the scene becomes frightful in the extreme. Some of the number fall upon the floor and writhe in convulsions as the weird and awful worship is continued.

SHEEP RIDING "PICK-A-BACK."

It is no uncommon thing in Constantinople, Turkey, for the porters to carry live sheep "pick-a-back" at the time of some feast when the sheep are desired for sacrifices. The sheep do not object to the ride and the men do not object to the burden.

A CITY WITHIN A CITY.

The bazars of Constantinople, Turkey, are a marked feature of the city. The grand bazar is of enormous size and entirely roofed over. It has streets, passages, fountains and booths, and seems like a city within a city.

SHOWERS OF BIRDS.

On the shores of the Crimea, Morea, and some of the Islands of the Grecian Archipelago, quails arrive in such dense masses at certain times of the year that the inhabitants say "it is raining birds," and they net them in great numbers. They salt them and pack them in barrels and export them to different countries. Quail scud before the wind and are carried across the Mediterranean. If they meet a gale they fall into the water. Thousands of them perish around the steep shores of Malta.

A TOWN ON THE FACE OF STEEP CLIFFS.

Epanomeria, on the Island of Santorina, in the Grecian Archipelago, presents a very striking appearance. The houses are ranged one above another on the face of steep cliffs on the northwest side of the island, which is a promontory. Some of these are excavations in the rock, while others are built on table-like projections. Some have arched roofs and others flat ones. The lower tier of these houses is 400 feet above the sea. The part of the promontory below the houses is perpendicular, and of bright red and black colors, mixed with scoria, for the formation is lava. The only way to reach the

town from below is by means of a zigzag highway cut into the cliffs. The town has many windmills up and down its cliffs and perched on its summit.

MARBLE ISLANDS.

The Grecian Archipelago contains several islands composed entirely of pure white marble.

THE SMALLEST COUNTRY IN THE WORLD.

The smallest country in the world is said to be the little neutral district of Moresnet, between Belgium and Germany. It contains only about two and a half square miles, with about 3,000 inhabitants. The principal occupation is zinc mining. The territory was declared independent in 1815, to settle the dispute when the boundary was fixed between Germany and Belgium, both countries wanting this region for its zinc mines. Its police force consists of one man. It pays a tax to Belgium, also to Germany.

A GIGANTIC NATURAL TUNNEL.

The grotto of Torgatten, in Norway, is a gigantic natural tunnel through a huge rock 400 feet above the sea. This tunnel, or tube-like passage-way, is at least 900 feet long and from eight to one hundred feet wide. The arches of its portal measure respectively 200 and 120 feet. The floor is covered with white sand and the sides of the tunnel are smooth as if chiseled by the hand of man. One can see the ocean with its cliffs and breakers through this tunnel, as if looking through the tube of an immense telescope.

GIANT CAULDRONS.

On the coasts of Scandinavia are remarkable excavations called "giant cauldrons." Blocks of granite have been rolled by the sea and shut in by rocks, and the

stones oscillating back and forth have worn great holes in the cliffs which look like enormous kettles and which the people say were formerly used by giants.

A PECULIAR MOUNTAIN.

On Torget Island, off the southwest coast of Nordland, Norway, is a remarkable mountain. It rises almost perpendicularly from the water to a height of 2,000 or more feet and terminates in a deep cleft which forms the basin of a small lake. Near the center of this mountain is a cavern 6,000 feet long and 600 feet high.

COD MOUNTAINS.

Off the coast of Norway is the greatest place for codfish in the world. In January and February they come down about the Lofoden Islands in such numbers that the fishermen call them "Cod Mountains." The fish pile themselves in the water one above another to a depth of more than a hundred feet, and when the fishermen cast their nets among these living, moving mountains they feel the sinkers touch the fish.

WHERE HELL IS LOCATED.

It is not generally known that there is a place on the earth bearing the uncanny name of Hell, but such is a fact. A short distance from Hammerfest, Norway, is a little town by no means very hot, and having no odor of brimstone about it, yet it is called Hell.

A FISHY TOWN.

Hammerfest, Norway, long known to pupils in geography as the most northerly town in the world, is one of the greatest fish markets on earth. One writer says: "Everything is fishy. You eat fish, drink fish, smell fish and breathe fish. The bill of fare is made up of fish, the water tastes of it and the air is reeking with it."

A KIND PEOPLE.

The kindliness, as a nation, of the inhabitants of Sweden has become proverbial. A noted traveler says: "They are kind to each other, kind to their wives and children, kind to their domestic animals, and kind to any little beast or bird which may chance their way. Their language is full of tender, kindly words and affectionate phrases."

AN INTERESTING STORY.

The copper mines of Fahlun, in Dalecaria, Sweden, are of picturesque appearance and remarkable in many respects. The following is told about the preserving qualities of the vitriolic water which trickles through the walls: In 1719 the body of a young man was found in an abandoned part of one of these mines. The corpse was in a perfect state of preservation as if the death was of recent occurrence. The people from far and near flocked to see the body, but none recognized it until at length an old woman more than eighty years of age tottered on her cane to the place and casting one glance at the body fainted away. She recognized in the corpse her affianced lover who sixty years before had disappeared in a mysterious manner. He probably had fallen through a crevice in the mine. Thus the old woman was permitted to look upon the face of her youthful lover, and to attend his funeral. A story similar to this is told about a young man who lost his life by falling through a crevice in an Alpine glacier. The ice preserved the body, and the lady to whom he was engaged was present at his funeral, she being very old and infirm.

A DANGEROUS SWING.

The natives of the Faro Islands hunt birds for their flesh, eggs and feathers. The nests of the birds are on the sides of cliffs 1,200 feet high. The fowlers go to the top of the cliffs and are let down from above by

ropes. When one is close to the cliff he can not see many feet each side of him, and so in order to see more he pushes himself out with his feet and guides himself by pulling a small rope from above to the place he wishes to go. It is an exciting and dangerous kind of a swing.

LAVA CAVES.

On the Island of San Miguel, one of the Azores, are the celebrated volcanic caves of Punto Delgada. Their entrance is through a narrow crevice which expands into lofty chambers which terminate under a low vault. The stalactites in these caves are of black lava, and the floor is covered with great sharp-sided lava blocks. It is not an easy task to walk about in this cave.

NOISY CARTS.

On the Azore Islands the native cart is a basket-like affair, fastened to huge wooden wheels which are fixed to an axle in a way to turn with it, making a terrible squeaking noise which the peasants say drives away the witches. Sometimes an ox and a cow are yoked together and fastened to one of these carts.

ASIA.

A VIEW OF FOUR NATIONAL FLAGS, EACH ON ITS OWN SOIL.

The flags of Great Britain, Turkey, Italy, and France, each on its respective soil, may be seen from Perim Island, in the channel at the southern entrance of the Red Sea. The flag of Turkey on the Arabian shore, and those of France and Italy on the opposite coast, where the border line between the two possessions occurs, and that of Great Britain on Perim Island itself. This is, perhaps, the only place in the world where so many flags, each on its own soil, can be seen at a glance.

SPRINGS OF FRESH WATER IN THE OCEAN.

In the Persian Gulf are many springs of fresh water, which bubble up through the salt water, yet do not mingle with it. The inhabitants of some of the islands depend on these springs for supplies of water, which is obtained in the following manner: A diver, with a water skin under his arm, plunges into the sea, and holds his bag over a spring. The force of the ascending current fills the bag and sends the man to the surface.

A NOVEL WATER CONVEYANCE.

Visitors to the Bahrein and other islands in the Persian Gulf are surprised at the novel mode of landing which awaits them. The water is so shallow near the islands that no boat can reach the shore, and the only mode of conveyance is on the backs of donkeys, which are driven to the boats by natives, without stirrups or bridles.

A JOURNEY UPWARD.

Graham and Boss, two men of world-wide fame as mountain climbers, have stood upon the summit of Mt. Kaben, a peak of the Himalaya Mountains, 23,700 feet above the sea. This feat is probably unsurpassed in the history of mountain climbing.

LIFE IN ELEVATED REGIONS.

At an elevation of 18,460 feet, at the Dookiah Pass, in the Himalaya Mountains, Dr. Hooker found flowering plants, and from that elevation observed large flocks of wild geese, flying to the regions of Central Asia, above a peak which is 22,750 feet high. Butterflies and other winged insects have also been found on the summits of high mountains.

THE CITY OF THE PLAGUE.

Astrabad, in Persia, at the foot of the Elbrooz range, is surrounded by a dry ditch and a mud wall. During the summer rains the air is so pestilential that the city has been called "the city of the plague." All the inhabitants who can, leave at that time.

A TYPICAL MOHAMMEDAN SCHOOL.

The typical Mohammedan school, as can be seen in Asiatic Turkey, is held in a room bare of furniture, even of seats, but having a raised platform across one end. The master sits on this cross-legged, with the Koran (the text-book) before him, and with a rod in his hand. On the floor sit the boys cross-legged. The master reads a sentence, and the boys shout it after him. This is repeated again and again. The brightest scholar is thought to be the one who has the strongest lungs. This in the main is the Mohammedan idea of education, although in some places more is attempted.

A PLAIN OF SALT.

The great salt desert of Persia is about seventy miles south of Teheran, sloping on all sides toward the center like a shallow plate, and covered with a layer of solid, sparkling salt. It appears like a vast frozen lake, and glistens in the sun like glass, and so solid is the surface that horses and camels can travel over it without any vibration being perceptible. Fragments of the salt, chipped off, are very hard and of snowy whiteness.

HOW MOHAMMEDANS REGARD WOMEN.

The degradation of womanhood in the East is well known. It is especially apparent among the Mohammedans in Turkey, as well as in other places. The Countess Cooper says: "I was told by a Christian in Cairo that he was once walking with a well-to-do Mohammedan, with whom he was intimate, and who had often discussed with him the different positions of women in their respective sects. As they passed an old veiled figure in the street, who shrank out of their way, the prophet delivered a passing kick at her.

"There," said the Christian, "that is what I complain of. You kick a woman as we would not kick even a dog."

"That," said the Mohammedan, with a look of astonishment, "why, that is only my mother."

FOREST CEMETERIES.

In Asiatic Turkey one finds very picturesque cemeteries and a strange method of burial. The Turks use no coffins, but lay the dead in the grave with a few boards around the body. A small opening is left from the head of the corpse to the surface of the ground. These openings are sometimes enlarged by dogs. A cypress tree is planted by the grave, and the cemeteries have become cypress forests, among which gleam white marble tombstones. Hundreds of turtle doves

perch on the trees by day, while bats and owls haunt them by night. The Turkish women make the cemeteries favorite resorts. They may be seen praying beside the openings that lead into the graves of their friends. The grave of a man is indicated by a carved turban on the tombstone, that of a woman by a palm branch. The style of the turban indicates the rank of the man and the time of his death.

A PIGEON MOSQUE.

The Pigeon Mosque of Constantinople, Turkey, is inhabited by pigeons. They are considered sacred by the Mohammedans, and priests are appointed to have the charge of them. When they are fed they almost trample one another on the ground. When they pick up their food their tails flutter in the air in one confused mass, and when they lift their heads their green and ruby throats glitter in the sun, making a beautiful sight.

THE OLDEST BURIAL-PLACE IN THE WORLD.

In Hebron, Syria, under the great Mosque, is the celebrated Cave of Macpelah, in which Abraham was buried, and also other patriarchs. There is no doubt about the identity of this spot. The purchase of this cave was the first legal contract of which we have any record.

A RAILWAY IN THE HOLY LAND.

A railway extends from Jerusalem to Jaffa, the ancient Joppa, a distance of thirty-two miles in a straight line. This road was built by a French company. Lydda, one of the places on the route, is in the midst of the Plain of Sharon, and is famous as the place where in ancient times was the school of Gamaliel. Jerusalem is now in easy steam communication with the cities of Europe, and will no doubt assume more and more the aspect of a modern city.

CLAY BOOKS.

Among the ruins of ancient Nineveh, in Asiatic Turkey, on the banks of the river Tigris, a library of clay books has been discovered. These books are sets of tablets, oblong in shape and covered with writing, done when the clay was soft. Each tablet was numbered and assigned a place in the library with a corresponding number so that the librarian could find it without difficulty. When several tablets were used for one book the first line of the tablet following was written at the end of the preceding one. Among the books are history, travels, and descriptions of natural objects, also hymns to the gods, etc.

REMARKABLE RUINS.

It has been said that if all the ruins of Ancient Rome were gathered in one group they would not equal in extent those of Baalbec, in Syria. The columns are magnificent. The stones are immense, some of them sixty-three feet long, fifteen wide and thirteen thick. One writer says: "Even with arch destroyed, columns overthrown, pilasters broken, and capitals defaced, so vast and so exquisitely beautiful in design and sculpture are the ruins which surround the traveler that we scarcely wonder at the fond superstition which leads the natives to aver and stoutly to maintain that masses so mighty were never transported and upreared by human hands, but that the once magnificent, but now ruined Baalbec, was built by the Genii reluctantly yet irresistibly coerced to their Titanic labors by the mighty power of the zeal of the wise Son of David."

FISH-SKIN CLOTHES.

The natives of parts of Siberia make clothing from fish-skins. They beat the skins until the scales fall off, then dress them with oil and sew them together for coats and jackets. The young girls ornament theirs with beads and shells. They are not unbecoming.

A HILL OF ROCK SALT.

On the southern shore of the Dead Sea, in Palestine, is a remarkable range of hills of rock salt, about 300 feet high, extending five or more miles northwest. These hills are called the "Ridge of Sodom." Large blocks of salt broken from these hills are scattered in all directions along the shore of the sea. At no great distance from this range is the supposed site of the ancient Sodom.

HOUSES WITHOUT GARRETS, CELLARS OR CHIMNEYS.

In Syria most of the people are poor and their houses are but one story. The south and west walls are usually of stone to resist the winter storms which always come from those directions. The other walls are of mud-bricks. Flat roofs are made of rafters covered with branches and reeds upon which moist clay is laid by dancing over it, the people singing and shouting. Every time it rains the owner of the house runs a heavy stone roller over the roof and the result inside is a shower of dust, clay and dirty water. Nearly every roof leaks. These roofs are used for drying fruit and for sleeping places. A missionary in that country had a favorite horse which often bothered him by running away. One day the horse slipped off his halter, and before his master knew it was on the roof of a neighbor's house. The roof was old and rotten and the horse slumped through, and dropped into the house to the great alarm of the family. The horse was not injured.

JACOB'S WELL.

The site of Jacob's well, in Syria, associated with Christ's ministry on earth, is practically undisputed, and stands almost alone in this. It can be approached only by a dark crypt, once the cellar of a church. In the floor near the center is a small opening which is the

well, half full of debris. The Greek Church has purchased the well from the Turkish government and is about to erect a church over the site.

THE OLDEST CITY IN THE WORLD.

Damascus, in Syria, is probably the oldest city in the world. It has been called an "earthly paradise," because of its beautiful verdure, domes and minarets. A nearer view of the city is not so pleasing. The upper stories of the houses project until they almost meet. The city is in shape like a spoon. The street called Straight, and the house of Judas, where Ananias found Saul praying, are pointed out to travelers. The Moslems say that beneath a certain gateway of the city is a casket of gold which contains the head of John the Baptist.

BASKET BOATS.

The "three wise men of Gotham who went to sea in a bowl" have rivals on the Tigris River, in Asiatic Turkey, for one may there see men who use baskets for boats. The Arabs call these wicker-vessels geoffah. Some of these boats are large enough to hold twenty persons. They have flat bottoms and are made watertight by a coat of pitch.

A STARTLING SALUTATION.

The Bedouins of Arabia have a very queer way of saluting a stranger. They ride at full speed until near him, then suddenly rein up and discharge a pistol over the man's head.

A TOWN IN THE CRATER OF A VOLCANO.

Aden, on the southwest coast of Arabia, is located in a valley which was the crater of a volcano. The word Aden means "Paradise," and the town was so styled by Arabs on account of its fine climate. A cloudy day seldom occurs. Its situation at the entrance of the Red

Sea made it at one time the chief mart of all Asiatic products. It is now controlled by the British who have made it a garrison and fortress. Its ancient rock cisterns are a striking feature of the place. They are partially in ruins, but are being restored by the British government. They are capable of holding millions of gallons of water.

THE MOUNTAIN OF MERCY.

Arafat, or the Mountain of Mercy, fifteen miles east of Mecca, in Arabia, is a granite hill about 200 feet high. It is regarded as a sacred place by the Mohammedans, who make annual pilgrimages to it. They believe that after Adam and Eve were driven from Paradise they were separated from each other for 120 years and then reunited on this hill.

THE MERRY DANCERS.

The aurora borealis, or "merry dancers," of northeastern Siberia begin with single bright pillars rising in the north, and almost at the same time in the northeast, which, gradually increasing, comprehend a large space of the heavens, rush about from place to place with incredible velocity, and finally almost cover the whole sky, up to the zenith, and produce an appearance as if a vast tent was spread in the heavens, glittering with gold, rubies and sapphires.

A FAIRY SNOW-FLOWER.

In the most northern part of Siberia grows a strange little snow-flower. It shoots through the frozen soil upon only one day in the year. It has three leaves, each of which is about three inches in diameter. These leaves seem covered with crystals of snow. The flower is star-shaped, with petals the same length as the leaves.

PUBLIC PRAYER-WHEELS AND PRAYER-BOARDS.

Among the objects of interest in Ourga, Siberia, and other places where the Buddhist faith prevails, are the prayer-wheels which are placed for public use in open spaces. They are hollow wooden cylinders placed under rude sheds, and covered with inscriptions and filled with prayers written on paper. In order to pray, one has to walk round and round inside of the shed, and turn the cylinder as he walks. Some people turn the large wheel with one hand, and a small portable one with the other. Some of the wheels are so large that several people can pray at the same time. The public prayer-boards are platform-like affairs on which the people prostrate themselves, lying on their faces.

A WONDERFUL MULTIPLE ECHO.

About 200 miles from the small town of Kirensk, in Siberia, the Lena River forces itself through a rocky gorge that has precipitous sides 500 feet high. A pistol-shot is repeated more than one hundred times, and sounds like a rolling fire of artillery. This is, probably, the most wonderful multiple echo in the world.

MEN WITH SCARLET BEARDS.

In parts of Arabia it is the fashion for the men to dye their beards a bright scarlet. The effect on the beholder is very startling.

A NEW WAY TO "SEE-SAW."

The little girls of Western Siberia play "see-saw" in a new way. They place a plank across a log, and a girl stands on each end. When they get well started, one of the girls springs into the air and comes down upon the board with such force that the next time the board goes up, she goes into the air some distance above it. The other girl does the same, and so they bounce up and down like India rubber balls.

A LAKE WITH A ROOF.

At Obdorsk, Siberia, is a remarkable natural curiosity which at first sight looks like a great snowy plain, but as one approaches it is seen to be a lake seventeen miles long and about nine miles wide. The curious part of it is that a roof of salt crystals covers almost the entire surface of the water, and is at least three feet above it. The roof has been formed by the evaporation of the water year after year, and is constantly becoming thicker and thicker. The water under the roof finds an outlet in the river Obi. A guide has charge of a boat which he will lower through one of the openings and allow visitors to examine the sparkling crust from beneath. He will attach a rope, however, to the boat, and hold that in his hand, for there is danger of getting lost without this precaution. The boat can be pushed along by pressing the hands against the salt ceiling, which sparkles as if set with diamonds.

USES OF THE BEAR.

The natives of Kamchatka are indebted to the bear for many things which to them are the comforts of life. Beds, coverlets, bonnets and gloves are made from the skin; the flesh is used for food, as is also the fat; the intestines are used as a substitute for glass in windows and as masks for protecting the face from the glare of the sun; the shoulder-blades are used for scythes to cut grass.

TEA MONEY.

The currency of Mongolia consists largely of small bricks of tea. A brick of tea, sixteen inches long, eight wide and one and a half thick is worth about thirty-two cents. When the brick tea becomes injured by passing from hand to hand, it can be broken up and used as a beverage. The Mongolians are not very particular about the fact that it has become very dirty in circulation.

BONE FUEL.

On portions of the steppes of Mongolia wood and coal can not be obtained and bones of cattle and other animals are used for fuel. It has been estimated that the bones of an ox evolve enough heat to cook the flesh.

HORNED HEAD-DRESSES.

The Bashgalis, on the Cabul side of Kafiristan, is a singular tribe. The women wear a remarkable head-dress. It consists of a black cap, upon which are two horns, each about a foot long. The horns are made of wood and fastened to the head-dress, which is of a cap-like form with lappets.

THE OLDEST NEWSPAPER IN THE WORLD.

The oldest newspaper in the world is published in Pekin, China. It was established in 911 A. D., and has been published regularly since 1351. It is the Court paper, and called "King Pao," which means "Metropolitan Reporter." It is published in three editions, and has a circulation of 1,500 or more copies. It is edited by the six members of the Academy of Han Lin.

A T-SHAPED CITY.

Pekin, China, is in general shape like the letter T upside down. Tartar city forms the stem of the T, and the Chinese city the top of it.

A WAX INSECT.

A very small white insect, which is a native of China, deposits on the branches of a kind of sumach tree a coating of wax resembling hoar frost. This is scraped off, melted and strained, and thus made to become a valuable article of commerce. This insect has been introduced by the French into Algeria.

LONG FINGER NAILS.

In China the finger nails of certain classes are allowed to attain a great length. They are carefully oiled and kept in tubes. These long nails indicate nobility or sanctity, and a person with such nails can not do manual labor.

CHILDREN GAMBLERS.

Gambling is a prevailing curse in China. Not only the old people but very small children indulge in the pastime. On every street groups of children may be seen around a peddler gambling for cake, fruit or money. They also gamble among themselves, and their parents encourage it.

STRANGE FUNERAL PROCESSIONS.

In a Chinese funeral procession two men lead, each bearing a huge Chinese lantern inscribed with the name of the family of the deceased. These are followed by two men with large gongs which are beaten at intervals; then come musicians who blow furiously on horns. Next is a man with a flag, and also one who scatters now and then bits of paper; then comes an empty sedan, followed by the son of the departed, if he has one; then the bier with the dead, and lastly some twenty or more mourners who cry and shriek as if heart-broken. The body is carried outside the city and entombed at just such a point of the compass. A quantity of mock money is burned near by.

A SPECTACLED BIRD.

The spectacled pelican is found along the southern coast of China, especially near the mouth of the Canton River. It is thus named from the naked skin which surrounds its eyes. The Chinese regard this bird as sacred, and never rob it of its eggs or young.

THE BRIDGE OF TEN THOUSAND AGES.

At Foo-Choo-Foo, China, is a remarkable bridge called the "Bridge of Ten Thousand Ages." It is said to be 800 years old. Hewed stones, three feet square and over forty feet long, are used as if they were timber, being laid across the tops of the piers. Flat granite slabs are laid on these for flooring. The bridge is a quarter of a mile long. It has shops along each side its entire length.

BABIES PICKETED IN THE FIELDS.

A traveler in China says he saw in country places companies of babies picketed out in the fields like so many goats. Each baby was fastened by a rope to a stake. The stakes were so far apart that the strings could not get tangled up as the babies moved about. They crept on all fours and played in the grass while their mothers worked in the rice fields near. They seemed to be happy and good-natured in the fresh air and sunshine.

THE HOUSE OF NAILS.

The House of Nails, in Pekin, China, is a coffin-like, wooden house, in front of a great temple. In its sides are many long nails so arranged that the priest who stays inside can not rest comfortably because of their sharp points. The priest often pulls a string and rings a bell. The worshipers in the temple near hear the bell and occasionally one goes and pulls out a nail and pastes over the hole where it came out a bit of paper on which is written his name; he then puts a small sum of money in a box near by, for repairs on the temple. Each nail removed makes the position of the priest more comfortable.

BIRDS THAT TURN SOMERSAULTS.

A queer little bird about the size of a robin, found in China, is called the tumbler bird, because it tumbles heels over head.

PLASTERS FOR SIGNS.

In China when a doctor gives a man a plaster which relieves his pain the patient takes it back to the physician and tacks it upon his door-post. A doctor's practice is known by the number of plasters on his door-posts.

THE LARGEST HANGING BELL IN THE WORLD.

The largest hanging bell in the world is in the monastery near Canton, China. It is forty-five feet in circumference, eighteen high and made of solid bronze, covered with Chinese characters, telling one of the favorite classical stories of the Chinese, and is estimated to contain over 80,000 Chinese letters. It was made in the year 1400.

A PECULIAR METHOD OF ADVERTISING.

The people of China have a peculiar way of advertising. The following effort of a manufacturer of ink is a good illustration of the style:

"At this shop Tae Shing (prosperous in the extreme), very good ink; fine! fine! Ancient shop, great-grandfather, grandfather, father, and self made this ink; fine and hard, very hard; picked with care, selected with attention. This ink is heavy; so is gold. The eye of the dragon glitters and dazzles; so does this ink. No one makes like it."

A YELLOW REGION.

In the valley of the chief tributary of the Hoang Ho River, in China, the hills and fields are yellow, and the rivers and brooks have the same golden tinge, for everything is covered with a yellow dust. The ground is spread with a yellow loam many feet thick, and the inhabitants of the land are themselves of a yellow complexion.

HOW THEY SALUTE IN CHINA.

In China they do not salute by shaking hands as we do, but when one man meets another he folds his hands together and gives them a shake, raising them up and down several times. The other man does the same with his hands and the salutation is over.

A TOWN OF BOATS.

On Pearl River is the boat town of Canton, China. The city proper not being large enough to accommodate all the people, many of them have built rafts by lashing together bamboo poles and covering them with soil which is planted with rice, thus making floating gardens. They also have boats in which they live, thus making a little town on the water. In times of drought these floating fields have averted famines, for they flourish when it is too dry on the land for crops.

HOW CHINESE BOYS ENTER SCHOOL.

The little six-year-old boy in China starts for school on a "lucky day," which is chosen by a wise man who pretends to be able to tell lucky days by looking at the stars. The little boy carries in his hands two candles, a few sticks of incense and some paper money. These are burned at the shrine of Confucius, a wise teacher who died long ago. While they are burning, the child bows down three times before the altar, to please Confucius so that he will help the boy to get along well at school. The boy is then ready to begin to read. When he has mastered eleven books and can write poems and essays about them his education is finished.

A PECULIAR LAW.

Seoul, Corea, is a city nearly as large as Boston. It is surrounded by a high wall in which are three gates. At sunset every night these gates are closed, and after that time no one outside can get in, and no one inside

can get out. A great bell in the center of the city is rung early every morning for the opening of the gates. The law says that the man or boy who is out in the streets after dark shall be whipped. The women, however, are allowed to go out any time.

TEMPLES WITH GOLD ROOFS.

Many of the temples of Thibet have roofs covered with thick plates of pure gold. Thibet is rich in minerals, and the natives give most of what they obtain to the priests, who do a large business in fortune-telling and driving away devils. When a person is in any kind of trouble he appeals to a priest or lama who says some devil is to blame and must be driven out, so he takes a silver bell in his hand and a piece of metal to represent a thunder-bolt, and pronounces over a form of words to terrorize the demons. The priests can afford to live in temples with gold roofs for they have plenty of business.

CHURNED TEA.

The people in Thibet get their tea from Western China in the form of bricks. They take a brick which consists largely of twigs and leaves and pound it in a mortar and boil it over a fire. They then strain it through a basket of coarse straw into a narrow churn. To this they add butter and salt and churn the mixture, after which it is poured into a tea-pot and served in wooden bowls.

GORGEOUS APPAREL.

The Parsee ladies of Bombay, India, dress in very gay garments. Their costumes are composed of many yards of the brightest colored silk fabrics wound around the limbs, enfolding the body and draping the shoulders. It is said that they appear as houris, floating about the earth in silk balloons with a ballasting of anklets, necklaces, ear-rings and jewelry.

WOMEN WITH MANY HUSBANDS.

It is the custom in Thibet for the women to each have several husbands. These husbands are generally, but not always, brothers. The wedding ceremony consists in the placing of a piece of butter by the bride's parent on the head of the elder bridegroom and by his parent on that of the bride. Presents are exchanged and no priest employed. The wife is treated with respect and consideration and in certain tribes is almost the queen of the family.

IMMENSE FANS.

In Calcutta, and other parts of India, the heat is at times so great that to keep comfortable the people hang damp matting around the room and force a current of air through it by an immense wind-wheel driven by manual labor.

SERPENT CHARMERS.

The serpent charmers of India handle the cobras, the most deadly serpents in the world, with as much ease and fearlessness as we would handle a rope. In some cases the fangs of the serpents have been removed, in others the snakes have become tamed by handling. The serpent charmers give public exhibitions in the streets and play and sing while the serpents appear to fall under their influence. The following is part of one of the songs thus used:

"O friendly snake, come forth to-day!
Enchanting airs our pipes shall play;
Taste the warm new milk while we play;
Come, be our guest, with fangs at rest.

Thou comest, come and do not fear!
Thy folds are glittering, come thou near!
Dance lightly, snake, and do not fear,
Thy dark hood swing, while thus we sing."

A WEALTHY EMPEROR.

The court of the Emperor Akbar of India was the most splendid ever known in that country. The carpets of his palace were of silk and gold, and the walls were hung with velvet and pearls. He kept 10,000 horses and 5,000 elephants. One day he was weighed three times in golden scales. He was balanced the first time with gold pieces, the second time with silver pieces, and the third time with perfumes. He commanded that all the weights used should be given to the people. He died in 1605, but his palace at Agra remains.

WONDER WORKERS OF THE EAST.

The performing fakirs of India have to some extent imitators in the magicians of our own country, who blow fire from their mouths, plant seeds that at once grow into trees, blossom and bear fruit, and do other strange tricks; but the wonder-workers of the East have found no imitators for some of their illusions. For example, they seem to ascend into the air on a spring, and to sit in the air with no support other than the hand resting on a pole. They also claim to have the power to become as dead men, and it is said on good authority that they have allowed themselves to be buried alive for days, and have then come to life.

MEN WHO DELIGHT TO TORTURE THEMSELVES.

The fakirs of the East in India, as well as in other places, delight to torture their bodies. They wear rags, eat the meanest food, hang from trees for days by their hair and feet, and cover themselves with serpents and human bones, and clinch their fists until the nails grow through their hands. They also often hold up their arms until they wither, and make pilgrimages by measuring their length on the ground, rolling over and over.

A QUEER SALUTATION.

In Thibet when one man meets another instead of making a bow and saying: "How do you do?" he runs out his tongue and scratches his right ear, which is being very polite.

THE MOST BEAUTIFUL TOMB IN THE WORLD.

The Taj Mahal of India has been often described. One of the most singular facts about it is that it appears to assume different colors according to the state of the atmosphere. Very early in the morning it is light blue; the rising sun gives it a roseate hue or bright yellow color; at noonday it is dazzling; when a storm is impending, it is a violet tinge, and in the moonlight it looks like a silver palace floating in the air. When illuminated with Bengal lights the effect is very beautiful. It is said that stern and unimaginative people have been known to burst into tears when entering its halls. It has been truly said that "in the midst of a heathen country he who treads Taj Mahal walks upon ground made holy by genius." The perfect finish of every detail of this remarkable structure will bear the scrutiny of the microscope.

A MOUNTAIN OF ROCK TEMPLES.

India is noted for its temples built in the solid rocks. The excavations of Ellora, near the town and fort of Dowlatabad, rival if not surpass all others in India. A whole mountain of hard red granite has been hollowed out into an immense range of highly ornamented grottoes and temples. These have been pronounced fit for the residence of a whole pantheon of deities, and for the reception of a whole nation of pilgrims.

A CAVE OF DOVES.

Amidst the mountains that bound Cashmere, India, on the north-east, is the Cave of Amurnath in a gyp-

sum rock. It is a natural excavation about 100 yards wide, 30 high and 500 deep. The Hindoos believe it to be the residence of their god Siva, hence a multitude of pilgrims go there to pray. The cave is the habitation of thousands of doves. If these fly out when the pilgrims pray, they take it as a sign that their prayers are accepted. As they shout their prayers the noise naturally disturbs the doves, and they fly out in alarm.

LARGE OXEN.

In the forests at the base of the Himalaya Mountains, and in some other parts of India, is found the Arnee, which is the largest animal of the ox kind yet known. It is called by some naturalists a wild variety of the buffalo, while others consider it a distinct species. Its horns often measure six feet each along the outer curves.

A TALL BIRD.

The Adjutant Bird, of India, sometimes attains six or seven feet in height. It has a very long bill, and large wings. A sausage-like pouch hangs from the under part of the neck. It also has another pouch-like appendage at the back of its neck, which it inflates during flight. It is a very greedy bird, and can easily swallow a cat. It acts as a scavenger, and is frequently seen parading the camps of English soldiers; hence its name.

A MARKING NUT.

In the mountains of India grows a large tree which bears a heart-shaped black nut, between the two coats of which is a black juice much used for marking cotton cloths. The addition of quick-lime and water brightens the color and prevents it from running.

BETEL-NUT CHEWING.

Nearly all the tribes of the Malay race in India chew great quantities of betel, which consists of the leaf of a species of pepper plucked green and spread over with moistened quick-lime and wrapped around a few scrapings of the betel-nut. This cud is put into the mouth and chewed. It has a burning taste, like red pepper, and colors the saliva a bright red, so that the teeth and lips appear covered with blood. Europeans do not generally become habituated to it because of its burning taste. Its habitual use blackens and destroys the teeth.

HOSPITALS FOR ANIMALS.

Baroach, a large town of British India, is remarkable for its Brahminical hospital for sick, old and infirm animals. Here one may see disabled horses, dogs, cats, monkeys, peacocks and insects tenderly cared for by a number of Brahmins who are supported by contributions from the people, and from the income of the land devoted to it. There are other hospitals of the kind in India.

CRUEL PUNISHMENTS.

In native families and schools in India cruel punishments prevail. One is to place a large flat stone on the offender's head. He is thus obliged to keep still or the stone will fall to his feet. Another punishment is to rub Chilly powder in the eyes of naughty children. Chilly powder is made from what we call red pepper, and when children are thus punished their hands are tied behind them. Sometimes a more cruel thing is done by rubbing sugar around the eyes to attract the ants, the sting of which is very painful. Red-hot needles are also thrust into the soles of the feet. These forms of punishment are suppressed by the English as much as possible, but they still prevail to some extent.

BUTTER FROM TREES.

The fruit of the butter tree of India yields a fixed oil which has the appearance of butter, and which may be used for all the purposes that cows' butter is used.

SACRED CHALK.

Dwaraca, a town of India at the western extremity of Kattywar peninsula, is noted for its trade in a peculiar kind of chalk which is used by the Brahmins for marking their foreheads.

SHOWERS OF FISHES.

In tropical countries where whirlwinds and violent storms occur, showers of fishes are not uncommon. In India, fishes from one to three pounds have fallen in showers. They were no doubt carried up into the air by violent winds, for they are always of kinds to be found in the vicinity where they fall.

CANDLES FROM TREES.

The sap of the Vateria Indica, a large tree of India, is clear, fragrant and very bitter. When dried it becomes yellow and glass-like in appearance. It is used in India as a varnish, and in Malabar is made into candles, which diffuse an agreeable fragrance, and when burning give a clear light with little smoke.

BUILDING ROOFS BEFORE WALLS.

The people of Japan have a peculiar method of house-building. They build the roofs of their houses before they construct the walls. The roofs are upheld by scaffolds made of bamboo poles, tied together with ropes. The rest of the structure is then built and the foundation laid.

LOW WAGES.

The native women of India will work hard carrying dirt and stone for three cents a day, and the men will do most laborious work for five or ten cents a day. Their expenses are not great. They do not wear much clothing, and their huts have but little furniture.

MAKING A HOLY MAN.

The Marwadis of Western India are in their way very religious. They make a "sanyasi," or "holy man," by dressing the candidate in fine clothes, and daily for a month seating him upon a horse which is led in procession about the streets. He is protected from the sun by a gorgeous umbrella, and followed by multitudes of people. A band of musicians precede the horse, and men with great fans in their hands walk on each side of it. On the last day the horse is led to a large tree outside the city under which there is an idol. The man's fine clothes are removed, and a plain white cloth is substituted. His head and face are shaven smooth, and after this, once in six months, all his hair must be plucked out with pincers or scraped off with ashes. He is also obliged to always wear a stiff piece of yellow paper over his mouth that he may not breathe the little insects in the air and thus destroy animal life. The only water he is permitted to drink is a little in which he rinses his hands after eating. He is placed under the care of an old "sanyasi," whose duty is to teach him how to be holy according to their rites and ceremonies.

A MONKEY TEMPLE.

At Benares, India, is a temple devoted to the monkeys. It is a very old stone building, in the form of a pyramid, and elaborately carved with figures of sacred animals. It has a pleasant play-ground for its 400 or more mischievous occupants. These animals are devoutly worshiped, and the Hindoo attendants,

who live near by, give careful attention to all their wants. The monkeys are of all ages and sizes, and are allowed to do just what they please, and to have every thing they want.

A NATURAL STREET-LAMP.

The traveler in the forests of India is often startled by the appearance of what seems to be an electric street-lamp. A nearer approach reveals the fact that the "lamp" is a bird's nest plastered all over with enormous fireflies, which are alive and attached to the nest by bits of moist clay. The baya bird that owns the nest does not like darkness, and has thus devised this plan of utilizing the lamps of the glow-worms.

A NEST THAT LOOKS LIKE A SUNFLOWER.

In parts of India a species of hornet builds a strange nest. It is of the size and shape of a large sunflower, and fastened to a bush or tree. The hornets are yellow, and when the nest is finished they settle upon it with their heads all to the center, thus making it look exactly like a sunflower. Travelers who try to pick this blossom find to their sorrow that it is a flower to be avoided.

NATURAL SOAP.

A climbing shrub grows in all parts of India, the root of which is used as a substitute for soap. It is yellowish-brown in color, and cracked and furrowed like old soap. It has a fragrant odor, and when rubbed in the hands in water makes a lather like the genuine article.

A PEOPLE WHO NEVER LAUGH.

The Veddhas, a primitive people of Ceylon, live in trees and caves, and clothe themselves with leaves. It is stated on good authority that they never laugh, which is a peculiarity seldom found in a race of men.

A BIG SPIDER.

In the mountains of Ceylon travelers have found spiders six inches long and with jaws like a bird's beak. The spider is not more curious than its web, which is like bright yellow silk, and strong enough to catch birds as large as larks. When the threads strike the faces of horsemen they say they feel like those of a lace veil, and it takes quite an effort to break them.

A SACRED FOOTPRINT.

Adam's Peak, on the Island of Ceylon, is a conical mountain over a mile high. On its summit is an impression in the rock which resembles a mammoth foot-print. It is five feet four inches long and two feet six inches wide. This hollow is protected by a canopy and surrounded by a brass rim. The Mohammedans regard it as a foot-print of Adam, while the Hindoos claim it as that of Siva, one of their gods. A priest resides in the mountain to receive the offerings of pilgrims. He also blesses them as they depart.

A VERY OLD TREE.

The sacred Bo tree of Ceylon was, according to satisfactory historical evidence, planted 288 B. C. The Buddhists believe that it is the identical fig tree under which Gotama Buddha reclined when he had his revelation or underwent his apotheosis. Pilgrims gather the fallen leaves as treasures. The tree is too sacred to be touched with a knife.

A CURIOUS CRAB.

The Calling Crab of Ceylon is a land crab of peculiar appearance. Its left claw is very small, while its right one is larger than its body; and the strange part of it all is, this crab carries its large claw elevated in the air, like a flag, or as if brandishing a weapon.

ELEPHANT PORTERS.

In the seaport towns of Ceylon elephants pile wood, load and unload vessels, and do the ordinary work of porters, while in the country these great creatures tend babies, and do all sorts of work.

A COUNTRY OF SMOKERS.

In Burmah the women not only smoke cigars a foot or more in length, but also carry them thrust through their ears. Very young children learn and practice this disgusting vice.

QUEER IDIOMS.

Each native tribe of Burmah has its own dialect. The language is sometimes called the Italian of the East, because of its smooth and soft sound. Some of the idioms are very peculiar. "My liver is hot, and my heart is red," means that one is perplexed. If one wishes to ask you if you are the author of a certain book he says: "Did you pull this out of your stomach?"

A CHEAP PLACE TO LIVE.

The United States Consul at Amoy gives the following interesting facts about the place: Workingmen live and support large families on fifteen cents a day, and are said to be as happy as workingmen anywhere. The daily fare of an Amoy workman and its cost to him are about as follows: One and a half pounds of rice, costing three cents; one ounce of meat, one ounce of fish, two ounces of shell-fish, one cent altogether; one pound of cabbage or other vegetable, one cent; fuel, salt and oil, one cent; total, six cents. The wife and children pick up drift wood, shell-fish and mushrooms, and so help provide for the family. Sometimes all the food is obtained in this way, for some of the things picked up are bartered for rice and vegetables. The rent of houses of four or five rooms averages five cents a day.

BA BÀ BÂ BÁ.

Prof. Max Müller in his "Lectures on the Science of Languages" gives an illustration of the different meanings given the same word in the Annamitic language spoken in Tonquin and Cochin China: "In this language the syllable 'ba,' pronounced with a grave accent, means a lady, an ancestor; pronounced with a sharp accent it means the favorite of a prince; pronounced with a semi-grave accent it means what has been thrown away; pronounced with a grave circumflex, what is left of a fruit after the juice has been squeezed out; pronounced with the ascending or interrogative accent, it means a box on the ear. Thus 'ba bà bâ bá' is said to mean, if properly pronounced, 'three ladies gave a box on the ear to the favorite of the prince.'"

FISH FIGHTS.

Fish fights are a favorite amusement in Siam. Much gambling is carried on in connection with them, and parents sometimes stake their children and their own liberty. The government grants licenses for these public exhibitions. The fish used is very pugnacious, and immediately attacks one of its kind when placed near it.

ORNAMENTS FOR CLOTHING.

Small children of the poorer classes in Siam wear no clothing, but nearly every one wears some kind of an ornament, either an anklet, a bracelet or a necklace. The children seem to be happy, although on their floating homes they have but a few feet of raft on which to play, and few of them have ever been on the land.

BARK FOR SLATES.

In Siam and other Asiatic countries the boys and girls use strips of bark from certain hard-wood trees for slates. They write on them, and then rub out the writing with sponges made of betel leaves.

A LOWLY GREETING.

In Japan, when a visitor appears the host falls on his knees, and lowers his face until his nose and chin rest on the back of the right hand. The visitor goes through the same ceremony, and sometimes both host and visitor repeatedly strike the floor with their heads. The hostess does the same when she receives a visitor.

A MAMMOTH CRAB.

In the waters near Japan is found the largest known crab. Its body is triangular in shape, and comparatively small, but its nippers each measure five feet in length, and between the tips of its nippers it measures ten feet. The Japanese use it as an article of food.

A QUEER NEWSPAPER.

A Japanese newspaper is a queer affair. Its last page corresponds with our first one, its columns run but half the length of the page; the titles run from top to bottom; it has no headlines, and but a very few illustrations, and those very rough. The papers are sold by newsmen; each man has a brass bell tied to his waistband behind.

JAPANESE COURTESY.

Sir Edwin Arnold said he was led to Japan by the fact that the language of its people has no imperative mood, no form of oaths, and no words of abuse. There is not a bad word in a Japanese dictionary. The people are very courteous; they invariably speak of another person in the most respectable way, and of themselves in the most disparaging way. Instead of saying: "Where are you going this afternoon?" they ask: "Where do you augustly condescend to repair?" They never say "Come in," but "Condescend an honorable entrance." The habit of honoring others and dishonoring themselves is carried to almost a ludicrous extent.

THE SUDDEN FORMATION OF A LAKE.

Lake Mitsu, on the Island of Hondo, Japan, is about seventy miles long and twenty-one wide. This great lake is said to have been formed in one night by the enormous depression of the ground simultaneously with the upheaval of Mt. Foosee in 285 B. C.

JAPANESE SHOES AND STOCKINGS.

The foot covering of both sexes in parts of Japan consists of blue or white cotton stockings, called tabi, made like clumsy mittens, with a special compartment for the big toe. This is so that the strap of the shoe, or sandal, can pass between it and the other toes. Sandals are usually made of plaited rice straw, but in rainy weather the people wear what has the appearance of a little stool on each foot—a huge, clumsy wooden sole with two upright supports underneath, about three and a half inches high, and a quarter of an inch thick. The prints left in the mud by these shoes are said to resemble those of hens' feet more than those made by human beings.

OBEDIENT CHILDREN.

The children of Japan are noted for their obedience to their parents. They seldom squabble among themselves, and disputes are generally settled by the eldest child, the rest abiding by his decision.

MINIATURE LANDSCAPES.

The gardens of Japan are miniature representations of landscapes. In them one can see hills, lakes, rivers, islands, and waterfalls, all on a piece of land not more than a hundred yards square. The trees in these gardens are dwarfed and made to grow in all sorts of strange shapes, such as figures of men, towers, arches, etc.

A COUNTRY DESTITUTE OF BEGGARS.

Begging is not practiced in Japan. If a man asks for food one may know he is starving, for the poor are supported by their relatives, and no one begs unless he is obliged to do so. When an accident injures the property of a Japanese, or he is sick, or in need of help, his friends and relatives feel under obligation to care for him, and they are faithful to do this.

STRAW SHOES FOR HORSES.

Japanese horse-shoes are about half an inch thick, made of rice straw, and tied to the horse's feet by means of straw strings just below the fetlocks. The driver is obliged to carry a fresh stock of shoes with him, for straw soon wears out, but is not expensive. A set costs less than a cent.

POCKETS IN SLEEVES.

The little boys of Japan delight in pockets, and have them in their sleeves, which are very large and flowing and sewed up part way so as to hold articles. They also tuck things inside the sash which is worn about the waist.

A JAPANESE PUNISHMENT.

Japanese boys and girls are never whipped, but the mother sticks a bit of rice paper called moxa on the arm or hand of the child and lights it with a match. The red hot moxa burns the skin and makes the child scream with pain, but it is only for a moment or two. The burn reminds the child of his fault.

N EASY METHOD OF WASHING CLOTHES.

In parts of Japan the people have a very easy way of washing clothes. They get into a boat and let the garments drag in the water after the boat by means of a long string.

"SPIT-BALL" PRAYERS.

In Japan idols are worshiped by chewing up paper on which prayers are written and throwing the "spit-balls" thus made at the gods. If the papers happen to hit a god and stick on his body, or on the railing before him, the poor deluded people think their prayers will be heard.

OYSTER FARMS.

Along the coasts of Japan one can see tall bamboos driven into the mud, forming barriers to which oysters and mussels readily attach themselves. When the tide is coming in these enclosures are opened, and as soon as it begins to turn they are closed again to cut off the retreat of the fishes. At low water the owner of the pounds rake off the shell fish. The oyster farmers are obliged to pay a tax to the government.

TUB-SHAPED COFFINS.

The coffins of Japan are, as a general thing, in the form of a square white box, or a strongly hooped vessel resembling a tub, in which the dead are placed in a sitting posture with their chins resting upon their knees.

TAKING OFF SHOES AS A GREETING.

When one friend meets another in Japan a usual salutation is to take off the slippers, or sandals, as a token of respect.

A CURIOUS INTRODUCTION.

When a stranger wishes to greet the head man of an Aino village, in Japan, he approaches, and they both kneel down and lay their hands together and rub them backward and forward in silence. When the ceremony is completed the men are introduced.

A PLANT THAT APPEARS TO MAKE FACE

The caricature plant of the East Indies has very peculiar leaves. They are large and heavy, and each one is marked in the center with yellow, in a way to resemble the outlines of a human countenance. When the wind blows the leaves of the plant they appear to be making faces at the observer

A MONKEY WITH A LONG NOSE.

The proboscis monkey of Borneo has a very long nose, which the animal can inflate to even greater dimensions than is natural. While leaping it holds its nose with its paws, apparently to guard it from danger. A traveler, who saw a troop of these monkey, says it is impossible to imagine such hideousness. To encounter such visages in a wilderness is to be horrified as one never was before.

FISHING FOR CROCODILES.

The natives of the east coast of Borneo use crocodile flesh as an article of food, and they fish for these huge creatures. They use a dead monkey for bait, which they attach to a long rattan and throw into the river. The crocodile is drawn on shore by means of the rattan.

A CAVE OF EDIBLE BIRDS' NESTS.

In northern Borneo is the celebrated cave of Gomanton. It is entered my means of a great hole in the side of a mountain. The cave is inhabited by hundreds of thousands of small swallows and bats. The bats swarm out of the cave by night and the birds by day. The nests are built along the sides of the cave and are formed of a glutinous substance very much like coarse vermicelli. They are delicate fabrics and much prized by the Chinese epicures, who make soups of them. The swallows feed on a plant called fucus,

which, after undergoing a change in the stomach, is discharged by the bird and used as material out of which to construct its nest. The nests bring a high price in the market, collectors making a large income. The jungle tribes of Borneo control this cave. They have to wear face masks when getting the nests or the birds would pick out their eyes.

A DECEPTIVE BUTTERFLY.

A very gaudy looking butterfly is seen on the island of Sumatra that is difficult to capture, because when it rests on a twig with its wings pressed together it looks exactly like a moderately sized dead leaf. Its markings correspond with the veins on a leaf and its wings are brown or reddish brown when closed. This protects it from its enemies.

A DEATH-DEALING PLANT.

In the volcanic region of Sumatra a very rare plant known as the *kali mujah* is found. It grows from two to three feet high, and has heart-shaped leaves of a delicate green color on one side, and blood red streaked with cream on the other. The flowers are very white, and about the size and depth of a coffee-cup, distilling a deadly perfume resembling in effects that of chloroform. All forms of insect life approaching it are overcome; and if inhaled for any length of time by full grown men, insensibility is produced, and the muscles of the face drawn up in a grotesque manner. Even one inhalation is followed by a violent headache and temporary deafness.

A POISONOUS VALLEY.

On the Island of Java is the crater of an extinct volcano which is half a mile in circumference, and filled with carbonic acid gas. The air in the valley is so poisonous that it kills every living thing that enters

it. The ground is covered with the bones of men and animals, and the place is called the Valley of Death.

AN ENORMOUS CLAM.

In the seas near the Molucca Islands is found an enormous clam called tridacna. The natives use the shells for washing-tubs. They are often taken to Europe and used in parks as basins for goldfish. One clam makes a good load for a horse, and its flesh is sufficient for a meal for twenty persons. It is generally attached to a rock, and has to be cut off with an axe. Its flesh tastes like that of an oyster, and it is a favorite article of food with the islanders.

WOMEN WITH BIG FISTS.

The native women of the Philippine Islands think a large fist is a requisite of beauty, and therefore bind their arms until their hands grow to an enormous size.

AFRICA.

DIFFICULTIES OF AFRICAN EXPLORATIONS.

Stanley thus gives the cries of his band when exploring the wilds of "Darkest Africa":

"Red ants afoot! Look out for a stump, ho! Skewers! A pitfall to the right! A burrow to left! Thorns, thorns; 'ware, thorns! Those ants, lo! A tripping creeper! Slippery nettles; 'ware nettles! A hole! beneath, beneath! look out for mud! A root! Red ants! Red ants amarch! Look sharp for ants! A log! Skewers below!"

HOW ELEPHANTS BATHE.

The elephant is neater than the Eskimo, and often bathes. He draws up a lot of water into his trunk, and by forcing it up into the air makes a fine shower which falls upon him like rain. He seems to enjoy this shower bath very much.

ASTONISHED AT SNOW.

When Mr. Ehlers, the explorer, ascended Mt. Kilima Njaro he was attended by several native porters who, living near the base of the great mountain, had never seen or handled snow. As they approached the snow-line they pulled off the boots with which they had been provided and plunged into the snow with their bare feet, thinking to have a merry time in the fluffy, white, wool-like stuff that covered the earth. They were much startled when they touched the snow, and rapidly plunged out again, saying they had burned their feet.

SUGAR-CASK NESTS.

There is a species of the ant, called the termite, that lives in trees in northern Africa, and constructs enormous nests in form like sugar-casks. These nests are made of gnawed wood which is cemented together and attached to the branches of the trees in a way not to be shaken down by the most violent storms. These ants are very destructive to all kinds of wood-work.

A CITY UNDER THE SAND.

In connection with the work on the proposed trans-Sahara railroad a mound of sand near Wargal, in the Algerian Sahara, was uncovered and the top of a dome revealed. Further excavations were made, and an entire mosque and several houses uncovered, thus showing a part of a city buried under the sand. The Sahara was at one time much more thickly settled than at present, and perhaps other cities are hidden under its shifting surface.

A CITY SHAPED LIKE AN ISOSCELES TRIANGLE.

Algiers, in northern Africa, is, in general outline, an isosceles triangle. The ancient Arabs compared it to a diamond with emerald setting because of its background of verdure-clad hills. The traveler Ober compares it to a milky opal because of its creamy-hued walls and roofs, which, at a distance, blend most beautifully with their surroundings.

THE PORCUPINE HUNTERS.

In northern Africa, among the mountains of Aures, is a savage people armed with clubs, and called the porcupine hunters. These men have with them a boy clothed in skins. When they find the hole of a porcupine they push the boy into it, and he pulls the creature out for the men to kill with their clubs. After this they all have a great feast.

THE MOST USEFUL TREE IN THE WORLD.

The date tree, a native of northern Africa, is probably the most useful tree in the world. It furnishes the principal food and wealth of millions of people. A liquid, called palm wine, is made from the sap of the tree; vinegar and sugar are also made from it. The date seed is roasted and used for coffee. An oil is obtained from the seed. All kinds of wicker-work, fans, canes, etc., are made from the leaf-stalks. The leaves are made into bags and mats. Ropes are made from the fibres at the base of the stalks. The wood is used for building fences, houses, etc. These are but a few of the many uses of this valuable tree.

A GREWSOME MEMENTO OF A MARTYR.

In northern Africa, in the museum of Algiers, is a plaster cast of an Arab boy named Geronimo, who, in 1569 was converted to Christianity and martyred by the Algerines. They were making concrete blocks for a fort at the time and buried the boy alive in one of the blocks, which they built into the wall of the fort. For three hundred years Geronimo lay in his plaster tomb. In 1853 the block was taken out and a plaster cast made of the mould in which he lay. One can see his distorted shape and the cords with hich he was bound.

A LAZY PEOPLE.

The Arab quarter of Algiers, in northern Africa, is most interesting. The streets are narrow, and the shopkeepers sit all day in little dens about eight by ten feet, in which each one has his own peculiar articles for sale; the shoemaker his slippers, the tailor his costumes, etc. An English writer thus describes groups of Arabs sitting in a row doing nothing: "Years elapsed between our first and our last visit, yet there they were when we came again, still doing nothing. There was the same old negro in a dark corner, making coffee and handing it to customers sitting in the

same places, in the same dream. In such places as these we fall asleep and dream—under the combined influences of coffee, hashish, the tom-tom, and heat—dream that the world is standing still, and that all the people in a hurry are dead."

SAND BATHERS.

The Mohammedan Arabs of northern Africa are not cleanly as a class, although the Koran commands frequent ablutions, yet it allows the believer to substitute sand for water. It is much less trouble to wash with sand than with water, and the nomadic Bedouins much prefer it. The appearance and smell of the Arabs warrants the conclusion that they always thus wash.

HORSEMEN WHO WEAR BUT ONE SPUR.

Arabs of Algeria wear but one spur and that on the heel of the right foot. They reason that if one side of the horse is spurred and made to go the other must run also, hence it is not necessary to spur both sides.

ARABIAN POLITENESS.

The Bedouin of northern Africa leads the same wild, roving life that his ancestors did. He is not without hospitality, but his standard of politeness is somewhat different from that of more civilized nations. Everybody eats from the same dish, taking solid food with the fingers and liquid with wooden spoons. The men eat first and the women take what is left. The host points out the best morsels to his guest and if he hesitates to take them he puts them into his mouth for him. When a distinguished guest visits a community the inhabitants all help furnish the repast and arrange themselves according to rank in a series of circles about the guest. Each dish, after it has been tested by the host and the guest, is served to the different circles successively, and the remnants given to the dogs that form the outermost circle.

MARRIAGES OF CHILDREN.

The greater part of the Moorish children in Morocco are married at ten years of age, and some even as young as seven. They live with their parents until they become old enough to care for themselves. A girl twelve or more years old is considered too old to marry.

COVERED STREETS.

Some of the streets in Fez, Morocco, are so narrow that it is impossible for two people to walk abreast. The business streets are not more than ten feet wide. A practice prevails of covering the streets on a level with the first story with shade roofs made of reeds and vines. The rays of the sun are thus shut out, except here and there, and in some open spots. These shade-roofs are covered with dust, and festooned with cob-webs.

A GUM HARVEST.

About the middle of December each year the Moors of Morocco encamp on the borders of the acacia forests, and for a month gather gum. The gum which exudes from the acacia tree is in the form of oval round drops about the size of a pigeon's egg and of different colors, as it comes from the red or the white gum tree. This hardened juice is the gum arabic of commerce.

A FAMOUS TREASURE-HOUSE.

At Miknas, between Fez and Morocco, is the Sultan's treasure-house, famed for its immense wealth in the form of gold and silver, which has been accumulating for centuries. The government is not expensive, and the taxes are very heavy, hence the treasure is constantly increasing. The treasury building has very high, thick walls with great iron gates. The treasure is kept in an underground apartment, constantly guarded by three hundred negro slaves, called the "black guard." This apartment is opened but once a

year, at which time the Sultan adds to his hoard what wealth he has accumulated during the year. No one knows how much money the treasure-house contains, but it is supposed to be an enormous sum. The Sultan has a subtreasury at Fez, and one on an oasis in the Sahara.

THE SWIFTEST RUNNER IN THE WORLD.

The ostrich of the Sahara and other places is the swiftest runner on the face of the earth. Dr. Livingstone says, the eye can no more follow the legs of an ostrich when it is running at full speed than it can follow the spokes of a carriage wheel in rapid motion. They do not appear to touch the ground. A strong ostrich can run at the rate of sixty or more miles an hour, although it does not usually keep up this rate of speed for more than a mile or so. If it were not for the habit of running in a circle it would be impossible to capture these birds.

A REMARKABLE TOWN.

In Arauan, in the western part of the Sahara Desert, is a singular town. It consists of a hundred or more houses surrounded by great sand dunes. Not a blade of grass is to be seen anywhere and not a tree. Nothing but sand, pale yellow sand, meets the eye as far as it can see. The town has no streets, but it has plenty of sand, and also many wells which yield pure, sweet water. The houses are very large and rectangular in shape, built of a kind of blue clay dug from the ground during the process of well-digging. They have flat roofs and narrow doorways and no windows. Each building is surrounded by an open court. The walls outside are surmounted by little points of dried clay for ornamentation. The entrance rises above the wall. The floors are made of stamped clay and covered with straw mats. The dwelling rooms are small and dark. Light and air are admitted through the doors that open

into the inner court, but these are closed most of the time to keep out the sand and flies. Supplies of food have to be brought from a distance of one hundred and twenty miles. A few hens, and sheep that have hair instead of wool, comprise the animals of the town. Its wells are its wealth, and the caravans of western Sahara here find rest and refreshments. The inhabitants are chiefly Arabs and Negroes.

FLUTES ON TREES.

A species of acacia which grows in Soudan, also in the State of Nevada, emits a peculiar whistling sound when the wind blows. This music is caused by the action of the wind through small circular holes made in the branches by insects, in order to deposit their eggs. When the larva emerges from these cavities the branches become musical instruments which in a gale sound like many flutes playing.

NARROW STREETS.

The streets of the old quarters of Cairo, Egypt, are very narrow. In the Jews' quarter many of the roofs of the houses of the two opposite sides project until they actually touch. The reason for the narrow streets of hot climates is that they make the streets as well as the houses cooler. They also make the cities safer from the attacks of enemies.

A MOUSE WITH BOOTS.

The Egyptian bird-mouse is a little creature that looks as if he had boots on his feet. He skips along on his hind legs as fast as a bird, and makes a nest in the sand. He is about the size of a rat. He can not remove his boots, for they are covered with stiff hairs and form a part of his legs. The Arabs eat these little creatures.

FERTILITY AND BARRENNESS.

After the annual inundation of the land of Egypt by the Nile the soil covered by the water is of the richest, loveliest, light-green color. It is possible in places to walk with one foot on the bright green carpet and the other on a barren, desert waste of sand, so marked is the limit of the inundation. The mud villages in the midst of this verdure have been compared to the marks of a soiled foot upon a rich carpet.

A DANGEROUS PLACE TO LIVE.

El-obeid, the chief town of Kodofan, is constantly invaded by wild beasts at night. The houses are mostly mud huts, and to insure protection against the nocturnal foes the poeple build strong fences of thorny brushwood about each house. An Egyptian governor resides here, and the town has a hospital and six mosques. The inhabitants make beautiful silver filigree.

VERY ANCIENT ARCHITECTURE.

At Abousambul, Nubia, on the left bank of the Nile, are two remarkable temples hewn out of the solid rock—perhaps the oldest existing specimens of architecture in the world. One of them contains fourteen apartments. The larger temple is fifty-seven feet long and fifty-two broad, and is supported by massive pillars. In front of the temple are four colossal seated figures, the largest pieces of Egyptian sculpture yet discovered.

SHOULDER RIDES FOR BABIES.

Egyptian women let their babies ride astride one shoulder. Very little children only a month or two old are thus carried. They soon learn to hang on by clutching their mother's neck or head-gear. The women by this means can do their housework and carry bundles while their babies take care of themselves "sitting up aloft."

BABIES IN JARS.

In some country places in Egypt the women often place their babies in round, jar-like, earthen vessels while they themselves are working in the fields. These jars are covered and have holes in the sides to let in the air. The women place their little ones in these vessels to protect them from the hyenas which may be prowling about.

THE OLDEST OBELISK IN THE WORLD.

On the banks of the Nile, not far from Cairo, Egypt, is the oldest obelisk in the world. It is the last relic, or, rather, the gravestone of an ancient city. The Greeks called the city Heliopolis, and it was the seat of the oldest university in the world. The obelisk, which stands alone, is sixty-eight feet in height, but its base is buried in the mud, and year by year the Nile keeps depositing earth about it, thus burying it still deeper. It is supposed to be over 4,000 years old.

AN ANCIENT THRESHING SONG.

On the walls of the tomb of one Pahiri, at El Kab, in Egypt, is a threshing song that dated from about 1650 B. C. It is illustrated by a wall painting which represents the oxen treading in a circle, with the driver seated on a revolving stool in the middle. This is the song:

"Thresh the corn, oh, ye oxen! Thresh for yourselves, oh, ye oxen!
The fodder for eating, the grain for your master!"

STRANGE STREET CRIES.

In Cairo and other cities in Egypt it is a custom for no one to move from where he is walking unless he is asked to do so by a driver or rider, hence there is a continual chorus of cries like the following: "Your foot, lady!" "Your left side, Oh woman with carrots!"

"Your back, Oh chief!" "Your right side, Oh man with figs!" To these cries the street venders add their voices: "Confection, oh, sugar for a nail! oh, confection!" "Honey! oh, oranges! honey!" The donkey boys shriek: "Uh, ah! uh, ah!" and the water carriers cry: "May God recompense me."

ROCK TOMBS OF KINGS.

Excavations in rocks have been used as burial places from time immemorial. The royal tombs of ancient Thebes in Egypt are striking examples. Here are burial places excavated, thousands of years ago, in the bosom of the Libyan mountains. One discovered by Belzoni contains the body of Osirei, the father of Rameses the second, buried 3,200 years ago. The tomb is entered by a steep path through a doorway covered with hieroglyphics. On the walls are emblems and pictures representing ancient Egyptian life in all its vicissitudes. The alabaster sarcophagus containing the body of Osirei was removed by Belzoni.

THE AGE OF THE SPHINX.

The Great Sphinx in Egypt is said to be of greater antiquity than the Pyramids, and they are supposed to be at least 4,000 years old.

CHILDREN OF CENTRAL AFRICA AT PLAY.

The little black boys of Africa like to play "go hunting." They hunt very small game—field mice. They make baskets in the form of long tubes which they conceal in the grass near where the mice live. Then they all jump up and down and make a great noise and frighten the mice so that they run into the baskets, thinking they are running into their holes. The children then catch them and tie their tails together, and sell them to those who desire to buy.

SALT MONEY.

In Abyssinia blocks of salt are used as a medium of exchange. These blocks are usually in the shape of a grindstone with one end pointed. The weight of each is about a pound and a quarter. Money of this kind loses its weight by frequent handling. To prevent this it is wrapped in the bark of a tree.

THE COLOR OF THE NILE.

The usual color of the waters of the Nile is a clear greenish hue, but during the inundation it changes to a deep brownish red, resembling the appearance of blood. This curious change in color is due to the sediments with which the water is charged. Jars of porous earthenware are used as filters by the people in order to fit it for drinking.

BEETLES AS FOOD.

A species of beetle found in Egypt is cooked and eaten with butter by Turkish women who think this diet tends to make one fleshy. Obesity is, with them, a point of beauty.

A CLAPPING SALUTATION.

Some of the tribes of Central Africa salute by clapping the hands together and stretching them out, alternately, several times. In some native villages in the morning on every side a continual clapping of hands is heard which is the native mode of saying: "Good morning! How do you do?"

HOW THE NATIVES OF CENTRAL AFRICA FISH.

The natives of Central Africa have more than one way of fishing, but the most curious, perhaps, is to connect two gourds by a stout bamboo stick. The gourds hold up the stick in the water, and the native sits astride of it as if he were riding horseback. He

uses his hands for paddles, and when in the middle of the stream lets down huge nets, into which he drives the fish.

STRANGE ORNAMENTS.

The native women of one of the tribes of Central Africa have a strange way of ornamenting their faces. They pierce the rims of their ears, also both lips, and insert bits of grass stalks about an inch long into the holes. Sometimes a woman will have as many as twenty of these grass-slips about the ears, mouth and nostrils.

A CIRCUS PERFORMANCE BY WILD BEASTS.

The hartbeest of Southern and Central Africa is a species of antelope of strange habits. Dr. Scheinfurth describes a curious and as yet unexplained habit of which he was a witness. Having approached nearer to a herd of these animals than usual without attracting their attention he observed them running in couples, like horses in a circus, going round and round a clump of trees, while the others stood in groups of three or four, intently watching them. After a time these in turn took their places, and two at a time ran their circuit in a similar fashion.

HOW STANLEY SAVED HIS NOTE-BOOK.

Stanley, the intrepid explorer, at one time came near losing his notebook in which was treasured the material for his book, "In Darkest Africa." He was writing in this book near a native village, and was surprised by the appearance of a band of savages who accused him of trying to bewitch them, and commanded him to throw the magic work into the fire or they would kill him. With much presence of mind he drew from his pouch a small pocket edition of Shakespeare, and substituted it for his note-book, saying: "If I burn this will you be friends and give food to my men?"

"We will," they all said, and Stanley at once cast the book into the fire, and thus saved his life and his notes also.

A LONG LAKE.

Lake Tanganyika in East Central Africa is without doubt the longest fresh-water lake in the world. It has been described as an enormous crevasse bordered on all sides by hills and mountains. Its length is 420 miles, and its breadth varies from 10 to 50 miles. Its scenery is very grand.

A GINGERBREAD TREE.

The doom palm, or gingerbread, tree is a native of Central Africa. Its leaves are fan-shaped, and the fruit is the size of a large lemon. Its outer skin is red. The pulp is a spongy, dry, sweet substance resembling gingerbread in taste. It is much used as an article of food. A cooling beverage is also made from it. Each fruit has one seed.

AFRICAN IRON-WORKERS.

The Balubans, of Central Africa, are quite skillful as iron-workers. They have clay smelting furnaces from six to ten feet high, and from forty to sixty inches in diameter at the base. The bog iron ore obtained near the surface of the ground is thrown into the furnace from above, while charcoal is placed in openings in the side which receive an air blast. The iron and slag are removed from the bottom. The forge is a round building about sixteen feet in diameter, with a pointed roof and open sides. The fire in the center of this building is kept in activity by a rude pair of bellows. The hammer is a solid piece of iron. A bent palm-branch serves as a pair of tongs, and the anvil is an iron wedge driven into a timber-bole. These native workmen make fine axes inlaid with copper, also other implements.

INVERTED TREES.

Travelers in Central Africa are sometimes surprised to see great tracts of country almost covered with dry mimosa trees standing with their tops in the ground and their roots in the air. This is the work of elephants, which feed on the tender roots of this species of tree. When the ground has been soaked by heavy rains it is not hard for an elephant to wind his trunk about one of these trees and thus pluck it from the ground. When an elephant finds a tree too large for him to uproot he brings another elephant to help him, and they do the work together.

ARMIES OF ANTS.

The bashikouay ants march through the forests of Central Africa in armies, often several miles in length. Along the lines are officers, who keep the army in order. If they come to a place where there are no trees they build underground tunnels, for they can not bear the heat of the sun. When they are hungry they devour everything that comes in their way, large animals as well as small, and the negroes run for their lives. They will not touch vegetable matter, but vermin is destroyed instantly. All the insect world flies before an army of this kind.

LITTLE MEN AND WOMEN.

On the Upper Saugha River, which is one of the tributaries of the Congo, in Central Africa, many families of dwarfs have been discovered. They are elephant-hunters, and generally live in the forest near the towns of important chiefs, whom they supply with the fruits of the chase. They wear their hair and beard very long, and are a very wild-looking little people. Other dwarfs have been discovered in other regions. They probably all belong to one ancient tribe, which has, by the fortunes of war, been scattered over the central part of the continent.

A LIVING BRIDGE.

When the bashikouay ants of Central Africa want to cross a stream they form a living bridge with their own bodies over the water. This is done by a great number of ants, each clinging with his foreclaws to his next neighbor's body. Over this living bridge the whole army of ants march in order.

LIVE MONEY.

In parts of Central Africa cattle and other animals are used as money. A man's wealth, in many places, is estimated by the number of cattle he possesses. The men sell their daughters to other men for wives. the price being a certain number of oxen or sheep.

A SNOW-STORM LIKE BUTTERFLIES.

Some natives from Central Africa were taken to Europe, and seeing for the first time a snow storm, mistook it for a flight of white butterflies. Lieut. Von François says the mistake is a very natural one. One day when he was ascending a tributary of the Congo, he saw the air so filled with white butterflies that he could think of nothing but a gentle fall of snow.

AN IMMENSE BLACK STONE WALL.

In West Central Africa, about 300 miles east of St Paul de Loanda, which is on the western coast, is what at first glance appears to be an immense, continuous black stone wall about 800 feet high and 14 miles long. This rocky range is composed of conglomerate blocks, many of which are 500 feet square at the base, and with almost perpendicular walls. The range can be ascended by a winding path through a cliff. The wall is about three miles wide. It has many parts separated by crevices from two to forty feet wide, The descent on the eastern side is also through a cliff.

On one of the largest rocks is the imprint of what is said to be that of a human foot, twenty-two inches long and seven wide.

BEER-DRINKING MONKEYS.

The natives of Central Africa make a beer of which the monkeys are very fond. It is intoxicating in its effects, and the ape-catchers are very glad to give it to the monkeys. They go to the parts of the forest where the monkeys are most numerous, and place under the trees vessels filled with the beer. As soon as the monkey sees and tastes the liquid he screams for his comrades, and they all drink until they fall in a stupor and are captured.

TREE TOMBS.

Many of the native tribes of Western Africa regard their musicians and medicine men as having communication with spirits; hence they entomb them in hollow trees, that their dead bodies may not defile the earth. The baobab tree, with its immense trunk often large enough to hold 240 men, is a favorite sepulcher.

A STRANGE CORONATION.

The native tribe called Mpongue, of Western Africa, has a peculiar ceremony when about to make one of their number king. They bury their dead king secretly, and then choose another, who is kept in ignorance of what is before him until he is surrounded by a dense crowd who spit in his face, beat him with their fists, and kick and curse him, and heap upon him the worst possible abuse. This they continue for about half an hour, when they convey him to the house of the old king, and for a little while curse him and then agree to obey him. He is presented with a silk hat as an emblem of royalty, and dressed in a red gown, and treated with great respect. A festival then follows during which the people all get drunk.

A RUINOUS-LOOKING TOWN.

Benguela, a seaport town of Western Africa, is built of clay and palm-branches. The population is chiefly free blacks. The town has a ruinous appearance, because of the custom of never repairing a house, but erecting a new one near the old one as soon as that begins to decay. This town was once almost entirely destroyed by the invasion of a herd of elephants in quest of water.

AN UMBRELLA-BUILDING APE.

Among the new species of apes discovered in Western Africa by Paul Du Chaillu, is one that builds nests to protect itself from the rain. This ape makes a great umbrella in a tree by laying leaves and branches together thick enough to shed water. When the leaves become dry the owner builds another nest. He sits under his nest and not in it, and builds a new one in about ten or fifteen days. The umbrellas are about ten or fifteen feet from the ground, and on the lowest large limb of a tree not near other trees. The monkey's seat is a projecting limb under the umbrella.

HONEST PEOPLE.

A recent traveler in Yoruba, West Africa, gives a good testimony concerning the honesty of some native tribes. He says he often saw bean-bread, cooked yams, and other articles of food displayed on a mat by the roadside, while the owner was a mile away. In passing, the men in his caravan would choose what food they desired and put a number of cowries into a calabash near. They always paid the exact price charged at the last market, and it never occurred to them to cheat in any way.

A WATER-VINE.

Throughout the western part of Guiana water is scarce in places, and an excellent drinking fluid is ob-

tained from a vine called the water-vine, which grows to a height of sixty to ninety feet. It winds itself loosely around trees and clambers to their tops and then falls to the ground and takes root again. The natives cut off six or seven feet, which yields about a pint of water. The water flows out when one end of the stick is elevated to the mouth. This sap quenches the thirst as effectually as water from a well or brook.

A VALUABLE PRODUCTION.

Since 1867, when the diamond fields of South Africa were discovered, there have been exported from Cape Colony enough diamonds to make a pyramid six feet high with a base nine feet square. The value of this pyramid would be $300,000,000.

A TREE FOUNTAIN.

The traveler's tree of Madagascar is in appearance like a mammoth fan. Its leaves are of enormous size, varying from ten to fifteen feet in length. They are used for thatching houses. This tree is called the "traveler's fountain" because when pierced, even in the driest weather, a quart or more of clear water flows out. Its leaves gather and retain the moisture in the air.

A SKELETON PLANT.

The water yam, or lace leaf plant, of Madagascar, has a peculiar structure. It grows in running water. Its leaves branch from a bulb like that of a potato, which is used for food. The leaves are from six to eight inches long, and narrow. Each leaf is a skeleton netted with veins like the finest lace, showing every fiber of the plant. The leaves grow below the surface of the water, while the flower rises on a stalk and rests on the surface of the stream.

ABANDONING AGED PEOPLE.

Some of the native tribes of South Africa have the dreadful custom of abandoning their old men and women. They build a fence about them, place beside them a little fire and water with food, and leave them to perish of starvation, or to be devoured by wild beasts.

OCEANICA.

AN ISLAND OF BIRDS.

The northwest island of the Sandwich group is called Bird Island because, as its name implies, it is the home of millions of sea fowl. They literally cover it at certain seasons of the year.

THE LARGEST CRATER IN THE WORLD.

The extinct crater of Haleakala, on one of the Sandwich Islands, is the largest in the world. It is surrounded by gray cliffs, which are in places 2000 feet high. Within is a heaving floor, which rises in a dozen or more mounds each having a fair-sized crater. The highest is six or seven hundred feet high. These mounds are dark red, brown, and green. The floor is of black lava. The circumference of the crater is about twenty miles and its greatest diameter about seven miles. It is said that New York below Central Park could here be laid away, and that some of the largest cities in the United States could be piled one on top of another in this grave before their spires would protrude from the top.

RIDING ON SURF-BOATS.

Among the ancient national sports of the Sandwich Islanders is that of riding on the tops of high breakers. A swimmer takes a flat piece of wood four or five feet long and one or two feet wide, and starts towards the outermost line of breakers. When it is reached he lies upon his board and is carried towards the land with great speed. When about to be dashed against the rocks he slips from the board and darts beneath the water, and swims out to sea again to repeat the feat.

A FEATHER CLOAK.

The king of the Sandwich Islands has a feather cloak which is computed to have cost at least $500,000. It is four feet long and twelve feet wide at the bottom. Its ground work is coarse netting to which bright yellow feathers are attached with great skill, making the garment look like a mantle of gold. The feathers are from a rare bird peculiar only to the highlands of the islands. Each bird has but two feathers of the kind, one under each wing. To capture these rare birds is a task, hence the value of the garment.

A RED LAKE.

On the Island of Hawaii in the crater of the volcano Kalauea is a lake of molten lava known as Halemaumen. The lava dashes wave after wave, like water, upon the shore. The foam and waves are a brilliant red in all its various hues. It presents a rare and beautiful sight.

A MOON DANCE.

The natives of Samoa Island greet the full moon each month by a dance. The men form in two lines, and performing regular motions resembling a gymnastic exercise, move towards the moon as it appears above the horizon. They keep time by chanting. The women follow with similar movements, and then the young girls engage in a more intricate dance, urged on by shouts. This is continued until they are completely exhausted.

RUBBING NOSES.

The natives of Samoa salute by rubbing noses together and the words: "Good, very good. I am happy now." This salutation is among equals. When an inferior salutes a superior he rubs his own nose and smells of his superior's hand.

BARK BED-QUILTS.

On the Island of Tongataboo, which is one of the islands of Polynesia, the natives use bed-quilts made of bark. The inner bark of a tree is beaten upon a board with mallets and joined together with arrow-root. The women have coloring matter and varnish, with which they daub the bark in squares, stripes, and triangles. These quilts are very light in weight, and to the touch resemble parchment.

A SINGULAR MONUMENT.

On the Island of Tongataboo is a singular monument. The island is of coral formation, and the monument is made of two rectangular blocks of stone, about forty feet high, with a large slab lying across from one end to the other as they stand perpendicularly. A large stone bowl rests on the center of the horizontal stone. These stones must have been brought to the island by way of the sea. Their history or object is not known.

A ROUGH MARRIAGE CEREMONY.

The Australian savages have a very simple yet inhuman marriage ceremony. It consists in a man stunning with a club the woman of a neighboring tribe whom he wants for his wife. Having knocked her down he drags her home and the ceremony is completed.

A PECULIAR BURIAL CUSTOM.

The nomads of Queensland, Australia, have a very peculiar mode of burial. They dry the corpse in the sun, knock out the teeth for keepsakes, and then deposit it on a framework of poles, throwing over it a few kangaroo skins. No member of the dead man's tribe will settle within a mile of the grave. The aborigines are very superstitious, and believe in evil spirits and spooks. They believe that men may live again as human beings of a superior rank.

BUTTERFLIES THAT BATHE.

It is recorded by a well-known traveler that when in Australia he frequently saw butterflies go into the water to bathe. They backed into the stream, and after remaining a few seconds flew away.

TOADSTOOL LAMPS.

In Australia is found a fungi, or toadstool, growth which is luminous at night. It emits a bright phosphorescent light of a pale greenish hue, resembling that of glowworms. Several of these toadstools placed in a dark room give light enough to enable a person to see to read.

NATURAL FLOATING MATS.

Australia has a peculiar vegetation. Among its wonders are natural floating mats. On the creeks and lagoons of Queensland grows a kind of grass which has roots, but, strange to say, they do not attach themselves to the bed of the streams, but become densely interwoven with the stems of the plant, and form floating masses of vegetation so strong that horses can walk on them.

TREE-CLIMBERS.

The natives of Australia are noted for their tree-climbing propensities. They use the "kamin," made of a supple vine, about sixteen feet long, at the end of which is a knot. The climber holds the knot in his left hand and throws the kamin around a tree trunk. Winding the other end about his right arm, with his body bent back, he ascends step by step.

BIRDS THAT LAUGH.

In the Zoological Garden of Melbourne, Australia, are strange-looking birds resembling small owls with donkey-like faces. These birds are called laughing

jackasses. They perch together in rows and look as if they were very much amused over something. Presently one of them says "Ha," which is repeated by the others until the entire row seems perfectly convulsed with laughter, and people standing by laugh with the birds until the tears run down their cheeks, and they are doubled up by their paroxysms. These birds will not laugh to order. Sometimes they refuse to laugh at all for an entire day, but merely smile. This laughing of the birds enrages the monkeys very much, and they at once set up an indignant chatter.

A FRILLED LIZARD.

The frilled lizard of Australia is about two feet long including its tail. Its striking peculiarity is a loose skin about its throat, which it can erect like the broad lace collars of Queen Elizabeth's time. This lizard when startled rises on its hind legs and jumps like a kangaroo.

A BIRD-BEAST.

The duck-billed platypus of Australia seems to be part bird and part beast. It has the bill and webbed feet of a duck and the body of an otter. It is covered with plushy brown fur. It is semi-aquatic, and about one foot long. Its hind feet are armed with spurs, and exude a poisonous liquid.

AN ISLAND OF SULPHUR.

In the Bay of Plenty, on the shore of New Zealand, is White Island, so called because near its center is a boiling spring, which is constantly sending up a volume of steam like a white cloud. The island is covered with immense quantities of crystallized sulphur, and is very hot all over its surface.

A COOL GREETING.

The natives of New Guinea express friendship by sprinkling cold water with the hand over the head of

the one they wish to salute. In New Hebrides and other hot regions the same custom prevails.

MUSHROOM-SHAPED ISLANDS.

Near New Guinea, in the vicinity of McCluer Gulf, are a number of curious islands. They are shaped like immense mushrooms. This peculiar form is due to the action of the sea on their bases which has worn away the structures, making pedestals, on which they stand.

BIRD DANCING PARTIES.

The Birds of Paradise which inhabit New Guinea and the adjacent islands sometimes have dancing parties. The males assemble, in parties of fifteen or twenty, on a tree and expand their plumage in all its glory, and dance from limb to limb. The females look on in admiration.

FLOWER-POT ISLANDS.

Several islands near New Guinea resemble flower-pots in appearance. Each one is surrounded by an elevated coral rim, or reef. A plateau occupies the center of each island. The raised rim protects the interior from winds. Some of the islands are inhabited.

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